Hospital Topics

TODAY'S HOSPITAL PRACTICES

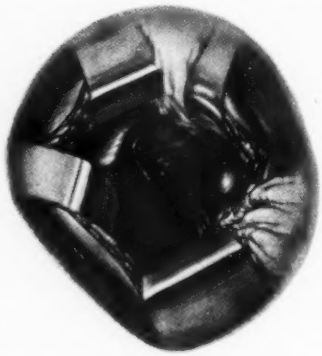
NOVEMBER 1961

PLUS:

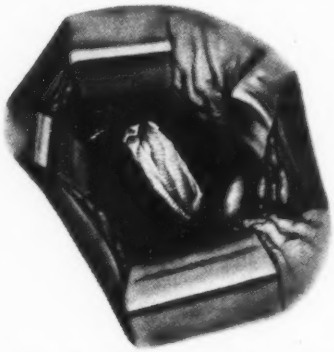
- ***Strike Out the Word 'Stroke'***
- ***Management of Croup In a Community Hospital***
- ***How Morale Surveys Implement Hospital's Personnel Program***

Cholecystectomy

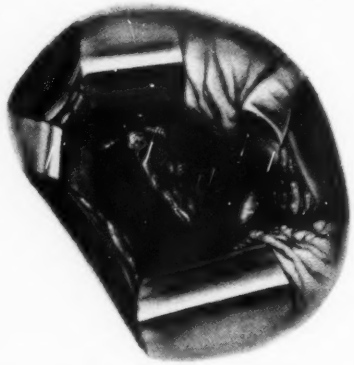
Bleeding from the gall bladder bed following cholecystectomy frequently confronts the surgeon with the problem of controlling persistent, oozing hemorrhage. Application of SURGICEL Absorbable Hemostat to the bleeding surface rapidly effects hemostasis and, because SURGICEL is completely absorbed without local or systemic toxic manifestations, it may safely be left in situ.



Gall bladder bed immediately following excision of gall bladder.



Application of SURGICEL knitted fabric strip to bleeding gall bladder bed. SURGICEL readily conforms to contours and intimately contacts the bleeding surface.



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NOVEMBER, 1961, VOL. 39, No. 11

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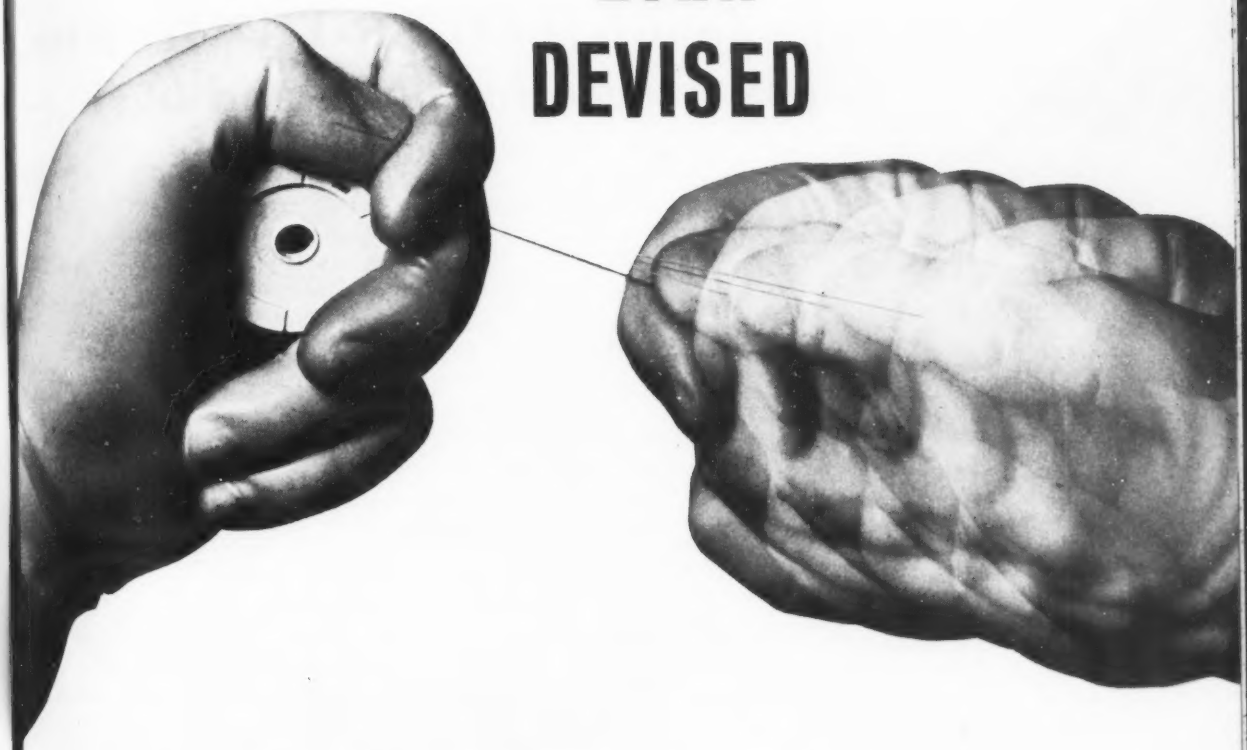

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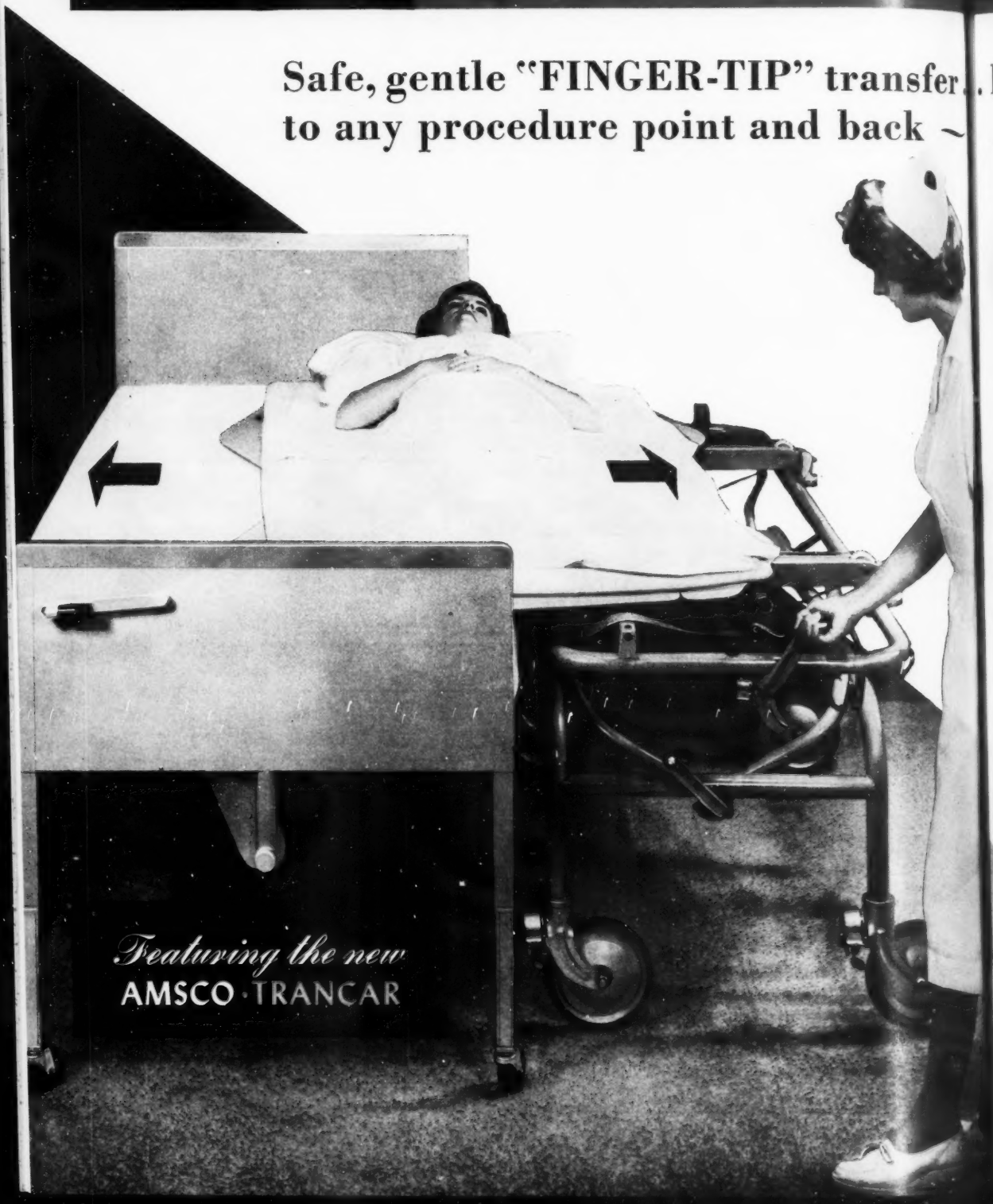

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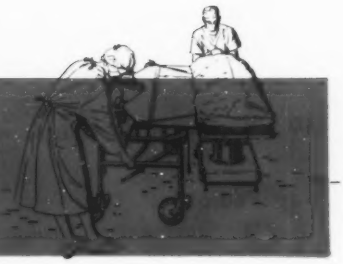

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THIS MONTH IN

HOSPITAL Topics

- TOPICS' cover this month spotlights the AHA convention in sunny Atlantic City. Convention coverage includes meeting reports, pictures, pertinent comments. The extensive convention report begins on page 27.
- Medical miracles have added years to the average life span. But what has been done to make those added years worth living? Not much, especially for those persons afflicted with hemiplegia. Whether we like to think about it or not, our youth-oriented nation has allowed its aged to merely exist, rather than live productively. Edward E. Gordon, M.D., a dedicated expert in physical medicine, tells how simple rehabilitation measures, begun in the general hospital, can return hemiplegic patients to productive living. Page 40.
- The way employees feel about their jobs—security, physical conditions, compensation, advancement opportunities—all these go into the nebulous quality known as 'morale'. Surveying this morale requires a particular outlook and set of criteria, rigidly controlled. Virginia E. Jones writes on morale surveys in a paper that won honorable mention in a TOPICS editorial competition. Page 48.
- Among the vast numbers of humans who are unfit to live with before the first cup of coffee in the morning are quite a few hospital patients. Being awakened at 7:30 for breakfast at 9 is no laughing matter—to either nurse or patient. Lankenau Hospital's 'Operation Coffee Cart' puts smiles on those early morning faces, and incidentally contributes to better patient care and hospital public relations. Page 53.
- Dr. Sigmund L. Friedman's fourth and final article on phases of community planning for hospitals concerns itself with methods used to measure the requirements for general-care hospital beds. Previous articles covered the theoretical and practical problems of such planning. Dr. Friedman explains the bed-death rate as a basis for determining hospital bed needs. He further explains that no mathematical formula can take into consideration all the factors that influence demand, but suggests the bed-death ratio, and other criteria, as guides. Page 54.
- The pioneer Poison Control system instituted at the Dow Chemical Company has concentrated extensive information on the company's 1,500 working chemicals into a readily visible index file and a series of wall cards. Occupying but a few feet of space, the system protects the firm's 5,000 employees. Page 99.

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FESSIONAL DIVISION

staph newsletter

15th OF A SERIES WITH SIGNIFICANT SUGGESTIONS FOR CONTROLLING CROSS INFECTIONS

CALLING attention to the dangers of influenza in high-risk patients, the U.S. Public Health Service recently alerted physicians and hospitals to the possibility of widespread incidence of Asian influenza this year. By the time you are reading this letter, such an epidemic may well be under way or becoming more and more threatening. Few hospitals need to be reminded of the high percentage of deaths from pneumonia-influenza and staphylococcal pneumonia which occurred during the severe 1957-1958 Asian-flu winter and the flare-up in the early months of 1960.

Unlike many other viruses, the influenza virus does persist in the environment for days, or even weeks, unless destroyed by intensive disinfection measures. Why not put the Tergisyl®/Amphyl® Spray disinfection team to work in your hospital to help protect against the spread of influenza and hazardous complicating infections? Tergisyl detergent-disinfectant is an efficient, economical means of achieving "aseptic housekeeping" on medical and surgical services and in food areas and personnel quarters. Use Amphyl Spray liberally on frequently touched and easily re-contaminated areas such as door handles, bedside tables, and equipment which is moved about the hospital.

Executive Housekeepers and aspirants were (or perhaps, *are* if you're reading an early issue of this letter) very much in evidence from November 27th through December 1st at the Medical Sciences Building of the J. Hillis Miller Health Center, University of Florida, Gainesville. The occasion—another of those usually oversubscribed executive development short courses for hospital housekeepers for credit towards certification by the National Executive Housekeepers Association. Subject of the program arranged by Mrs. Anne J. Vestal, Executive Housekeeper of the Teaching Hospital and Clinics at this Center—Effective Communications. With quite a reputation in this field herself, the instructional staff assembled by Mrs. Vestal included eleven University professors. The students—housekeepers from over-100-bed hospitals in the Southeastern Conference.

May we help you "communicate" the simple procedures for using Lehn & Fink disinfectants to your personnel? Let us know which products or which areas of the hospital interest you most. Convenient 3" x 9" cards for individual distribution or bulletin board posting are available on how to use O-syl® and Amphyl® disinfectants. Tergisyl® detergent-disinfectant procedures are included in a humorously illustrated booklet. Please let us know the quantities you need. You'll find these printed materials a tremendous time saver in giving instructions as well as in having your instructions followed regularly.

Have you made arrangements yet to see the new movie, "Stamp out O.R. Staph"? This film story of the "zone concept" of O.R. infection control as practiced at Huggins Hospital in Wolfeboro, N. H., emphasizes the importance of a correlated program for attaining and maintaining strict asepsis through germicidal cleaning and discipline with a consequent infection rate of only .25% in 1200 operations. Dr. Ralph Adams, the Chief of Surgery at Huggins, has reported this experience in detail in the March, 1960, Surgery, Gynecology & Obstetrics—but seeing the film brings the whole story of his successful five-point plan for infection control to life. Requests for showing the film should be sent to Aetna Life Affiliated Companies, Hartford 15, Connecticut, or to the American Hospital Association Library in Chicago.

We keep reading in the hospital and medical journals about the difficulty of de-contaminating endoscopic instruments with any assurance that the contaminating organisms have been killed. Protection of the optical system does create problems. But, did you know that, using Lehn & Fink's highly refined phenolic disinfectants, efficient microbicidal activity is achieved without injuring the lens system? Here's how you do it: wash off gross contamination with tap water, then immerse in 2% Amphyl® for 20 minutes only, rinse with sterile water, store in sterile wrap. Besides freeing the endoscopists from worry about cross infecting the patient with Staphylococci, TB bacilli, the coli-aerogenes group, Pseudomonas, Proteus, or Enterococci—this quick yet effective disinfection method frees these expensive lens system instruments for frequent re-use.

By now you may be familiar with how easy it is to use Amphyl® Spray to disinfect hard-to-reach areas—and as a pleasantly aromatic air deodorant which removes rather than masks odors. Do you also know that it is effective in preventing mildew on fabrics? It leaves no oily marks or sticky residue but is a highly efficient fungicide.

Would you like specific procedures for controlling infection in general housekeeping, isolation units, O.R. and recovery, O.B. and maternity, nursery and pediatrics, emergency and outpatients, and laundry? Then please send for your copy of our complete kit, "Contamination Control that Works...in Your Hospital". If you would like each member of your Infections Committee to also have a kit, we will be glad to send copies individually addressed. Just send us the names with your request.

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Please send for the procedures information mentioned in this letter. If we can help you on budgeting and buying plans, please let me hear from you.

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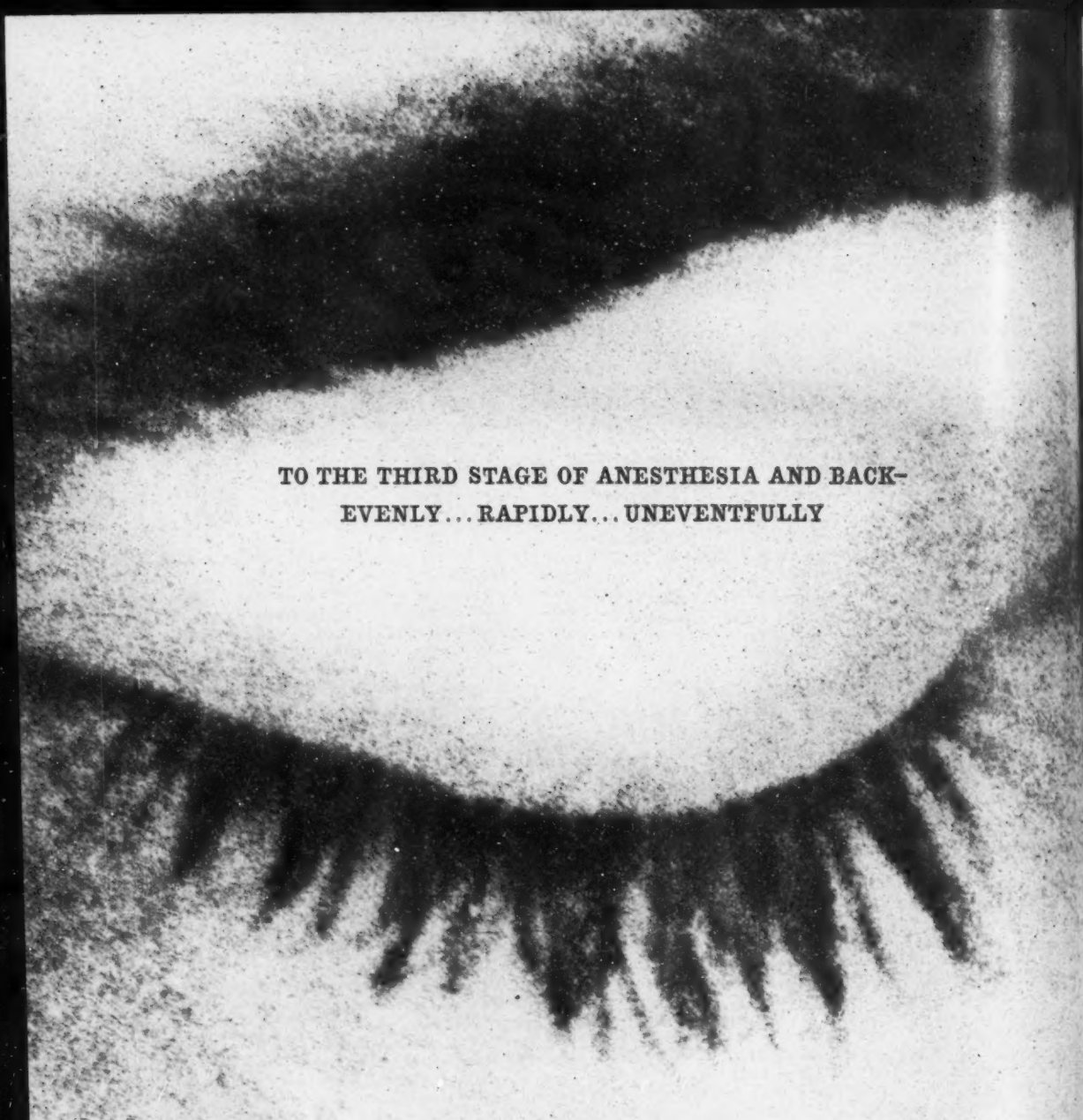

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HOSPITAL Topics

VOL. 39, NO. 11
NOVEMBER, 1961

Scanning the News

Britons Hot on Cold Trail

The British Medical Research Council reports that a vaccine against the common cold is now a possibility, following a breakthrough in research.

The breakthrough came when scientists working at the common cold research laboratory at Salisbury discovered that with modification of the technic of tissue culture, viruses of the common cold could be grown consistently.

The Council somewhat dampened sneezers' hopes with this caution, however: if many types of cold virus exist, prospects of developing a reliable single vaccine are not so bright. There are limits to the efficacy of vaccines containing a large number of components.

Sir Harold Himsworth, secretary of the council, states that he does not know how long it will take to develop the vaccine, but hopes that when it is developed it will give protection against 25 to 50 percent of colds.

Sick Leave Abuses Found in Younger Group

An Army study has revealed a definite relationship between age, sex, job level, and location with the use of sick leave by its civilian employees.

Employees in the south use the least leave, an annual average of 56 hours, compared to 68 hours by employees in the northeast and east-central states.

City workers use more leave than those in the rural sections. Women use more sick leave than men, and men in blue-collar jobs tend to use more than their white-collar colleagues. Supervisors use less than those they supervise.

Younger employees use more leave than their middle-aged coworkers. This finding "doesn't seem reasonable," according to the army surveyors, and add that appearances suggest that greater possibility of abuse exists with employees in the 24-35 age group. As employees become older (36-47) and possibly more responsible, there is a tendency for sick leave use to diminish.

Photo courtesy Chicago Sun-Times

This team of pretty student nurses spearheaded "operation makeup" for the recent Presbyterian-St. Luke's Fashion Show in Chicago. The six were schooled in proper cosmetic application at the Elizabeth Arden salon, and in turn were in charge of makeup for 60 nurses who appeared in a special feature of the glittering annual charity show. The nurses, who appeared in uniform, used a more subtle makeup than the socialites modeling sophisticated ball gowns. The new instructors plan to hold classes for the rest of the 417 students at the school; they consider the technics they learned can be applied to on-the-job and dating makeup. The "teachers" are (l. to r.) Dale Henderson, Sue Gros, Diane Lighthall, Sharon Lugar, Margaret Maxwell, and Mary Ann Tatara.

Mickeys and Minnies Respire in the Name of Research

By testing the radioactive breath of a mouse, two University of Chicago researchers can tell whether it has cancer.

However, George T. Okita, assistant professor in the department of pharmcology, and Esmat A. Ezz, a graduate student, warn that they have not come up with a new cancer detection method for humans—or even for mice. The object of their experiment is to find the underlying biochemical cause of cancer.

Mice in the test groups were given injections of a number of so-called "biochemical intermediates" —biochemicals like glucose and acetate that are immediately burned in

(Continued on page 75)

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News Briefs at Press Time

TRAINING PUBLIC IN EMERGENCY MEDICAL CARE GOAL OF PROGRAM

Three workshops this fall launch ambitious medical self-help program devised by PHS. Program's goal is training, before end of 1960's, of 50 million Americans to give emergency medical care in disasters.

First of three regional workhops was held in Brooklyn in mid-October. Others are scheduled for November 19-22, in Alameda, Calif., and December 4-7, in Battle Creek, Mich. Expected attendance at each: 100 doctors, public health officials, civil defense heads, and school officers. Each registrant will receive a medical self-help training kit, including 12 lessons planned for eight two-hour sessions. Topics of lessons: fallout and shelter, hygiene and sanitation, water and food, shock, bleeding, artificial respiration, fractures, transportation of injured, burns, nursing care, infant and child care, emergency childbirth.

Plans are to distribute this fall 300,000 copies of the family guide manual to every physician in the country and allied medical personnel. With cooperation of AMA's Council on National Security and of medical, educational, and civil defense leaders at state and local levels, PHS hopes that before next July 300,000 families will have at least one member who has taken course.

CHICAGO MEDICAL SOCIETY WINS DISPUTE OVER HOSPITAL ASSESSMENTS

At insistence of Chicago Medical Society, Grant Hospital has agreed to reinstate three physicians dropped from staff for refusing to pay compulsory assessments to hospital's building fund.

"No hospital will succeed without community support, and the doctor has usually provided both medical and economic support," said Ralph Dolkart, M.D., chairman of CMS committee to investigate informal charges of unethical conduct. "This should continue and must continue, but as far as economics are concerned on a voluntary basis as with the community at large.

"Although the motivations of the Grant Hospital staff in being desirous of building expansion to better provide for community medical needs were thought commendable, the fact that the building-fund assessment was coupled with loss of staff rank or privileges was deemed inimical to the best interests of the community."

Medical society's council said it was investigating four other Chicago-area hospitals for compulsory assessments.

DIRKSEN CHALLENGES KEFAUVER STATEMENT ON DRUG PRICES

As Sen. Estes Kefauver (D., Tenn.) opened another round of hearings into pricing and licensing practices in the drug industry, Senate minority leader Everett M. Dirksen (R., Ill.) challenged his colleague's statement that "prices and profits in the ethical drug industry are excessive and unreasonable."

Senator Dirksen said he did not agree with the statement and was "distressed" that it gave the "unfortunate impression" of being a finding of the Senate antitrust committee, which Kefauver heads.

Chairman Kefauver amended his statement by indicating that it represented his opinion, not findings.

PHS ANNOUNCES FUNDS TO ENCOURAGE OUTPATIENT SERVICES FOR AGED

Allocation of $750,000 among 31 institutions in 18 states to encourage experimental out-of-hospital health services for chronically ill and aged has been announced by PHS Surgeon General Terry.

Most recipients are health departments, though a few nonproht welfare groups are included. Ten of approved projects are for development of home nursing services. Others are for central information and counseling, establishment of homemaker programs, nursing-home improvements, coordinated home care.

KLICKA CHARGES HOODLUMS ATTEMPT TO ENTER CHICAGO HOSPITAL FIELD

Criminal and hoodlum elements are trying to move into the hospital field in Chicago, Karl S. Klicka, M.D., executive director, Hospital Planning Council of Metropolitan Chicago, declared in a recent press conference.

The council is drafting suggested legislation to prevent investment of crime-syndicate money in Illinois hospitals, and hopes to submit this proposal at next special session of Illinois General Assembly.

Syndicate figures interested in backing Chicago hospitals have concentrated on proprietary hospitals, Dr. Klicka said.

BRIEF BRIEFS

—PHS has extended to December 15 deadline for applications for first grants supporting experimental construction and equipment projects, under new Community Health Facilities Act.

—New PHS publication (No. 880) gives statistical summary of Hill-Burton program since its beginning. It includes data on facilities, costs, obligated funds, status of construction. Free copies can be obtained from Division of Hospital and Medical Facilities, USPHS, Washington 25, D.C.

—Wilson T. Sowder, M.D., formerly chief of Florida health service, heads new Office of Aging in PHS.

—National Council of Senior Citizens for Health Care Through Social Security claims more than 300,000 affiliated members after first two months of existence.

Gordon M. Marshall

Calendar of Meetings

NOVEMBER

1- 3 Indiana Hospital Association, French Lick Hotel, French Lick

2- 3 Oklahoma Hospital Association, Mayo Hotel, Tulsa

2- 4 AHA Institute, Hospital Directors of Medical Education, AHA Headquarters, Chicago

5- 8 Association of Military Surgeons, Mayflower Hotel, Washington, D.C.

6- 8 American Occupational Therapy Association, Sheraton - Cadillac Hotel, Detroit

6- 9 American Association of Inhalation Therapists, Statler-Hilton Hotel, Buffalo

6- 9 Southern Medical Association, Adolphus Hotel, Dallas

6-10 AHA Institute, Physical Therapists, Deauville Hotel, Miami Beach

6-10 AHA Institute, Hospital Pharmacy (Specialized), AHA Headquarters, Chicago

8-10 Maryland-D.C.-Delaware Hospital Association, Shoreham Hotel, Washington, D.C.

9-10 Kansas Hospital Association, Baker Hotel, Hutchinson

9-10 Minnesota Hospital Association, Leamington Hotel, Minneapolis

9-10 Virginia Hospital Association, John Marshall Hotel, Richmond

9-11 American Academy for Cerebral Palsy, Chase and Park Plaza Hotels, St. Louis

13-15 Association of American Medical Colleges, Queen Elizabeth Hotel, Montreal, Quebec

13-17 American Public Health Association, Cobo Hall, Detroit

13-17 AHA Institute, Hospital Housekeeping (Advanced), AHA Headquarters, Chicago

13-17 AHA Institute, Dietary Department Administration, Somerset Hotel, Boston

14-16 AHA Institute, Directors of Hospital Volunteers (Basic), Cosmopolitan Hotel, Denver

16-18 American College of Obstetricians & Gynecologists, Conference on obstetrical, gynecologic and neonatal nursing, Kentucky Hotel, Louisville

17-21 National Society for Crippled Children and Adults, Denver-Hilton Hotel, Denver,

25-27 American College of Chest Physicians, Brown-Palace Hotel, Denver

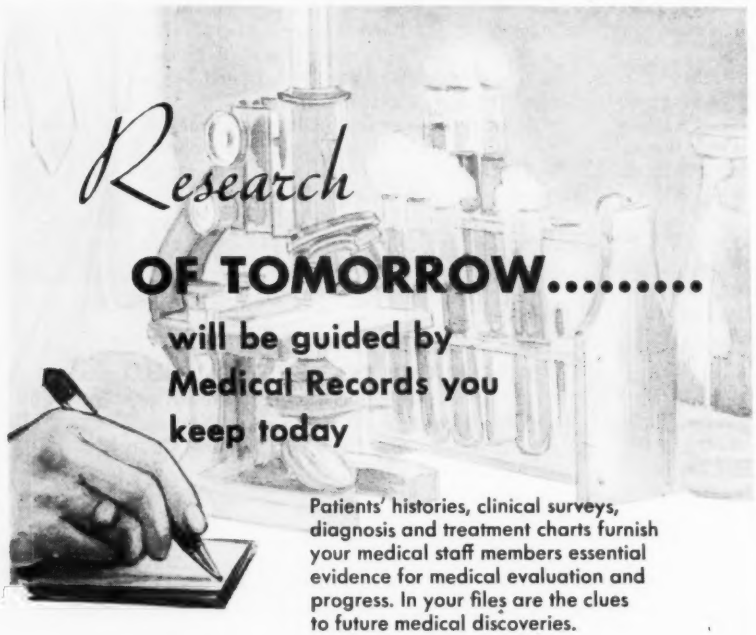
26-Dec. 1 Radiological Society of North America, Palmer House, Chicago

27-30 AHA Institute, Operating Room Administration (Advanced), Sheraton-Lincoln Hotel, Indianapolis

27-30 American Medical Association, Clinical Meeting, Denver City Auditorium, Denver

28-30 AHA Institute, Hospital Dental Service (Advanced), AHA Headquarters, Chicago

(Continued on page 14)



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CALENDAR OF MEETINGS

(*Continued from page 12*)

30-Dec. 1 Illinois Hospital Association, St. Nicholas Hotel, Springfield

DECEMBER

2- 7 American Academy of Dermatology and Syphilology, Palmer House, Chicago

3- 6 American Association of Hospital Accountants, Regional Institute on Hospital Accounting and Finances, Hotel Kenmore, Boston

11-15 AHA Institute, Hospital Design and Construction, Statler-Hilton, Los Angeles

13-15 AHA Institute, Medical Record Librarian's Institute on Medical-Legal-Principles of Medical Record Administration (Advanced), AHA Headquarters, Chicago

26-31 American Association for Advancement of Science, Denver-Hilton Hotel, Denver

JANUARY

17-19 Alabama Hospital Association, Admiral Semmes Hotel, Mobile

18-20 American Society of Clinical Radiology, Arizona Biltmore Hotel, Phoenix

22-24 National Association of Private Psychiatric Hospitals, Colonial Beach Resort, Sarasota, Fla.

22-26 AHA Institute, Nursing Service Administration, Memphis

26 South Carolina Hospital Association, Wade Hampton Hotel, Columbia

27-Feb. 1 American Academy of Orthopaedic Surgeons, Palmer House, Chicago

29-Feb. 1 American College of Surgeons, Sectional Meeting for Doctors and Graduate Nurses, Statler-Hilton and Biltmore Hotels, Los Angeles

31-Feb. 1 AHA Midyear Conference of Presidents and Secretaries, AHA Headquarters, Chicago

FEBRUARY

1- 3 American College of Hospital Administrators, Congress on Administration, Morrison Hotel, Chicago

3- 6 Congress on Medical Education and Licensure, Palmer House, Chicago

5- 9 AHA Institute, Nursing Service Administration, San Francisco

7- 9 American Academy of Occupational Medicine, Pittsburgh-Hilton Hotel, Pittsburgh

7-10 American College of Radiology, Roosevelt Hotel, New York City

12-14 AHA Institute, Budgeting, AHA Headquarters, Chicago

19-21 Association of Operating Room Nurses, Annual Congress, Denver-Hilton Hotel, Denver

26-Mar. 2 American Protestant Hospital Association, Chicago

MARCH

5- 7 American College of Surgeons, Sectional Meeting, Sheraton-Cadillac Hotel, Detroit

5- 8 AHA Institute, Emergency Room Nursing Service Management, AHA Headquarters, Chicago

5- 8 Southeastern Surgical Congress, Louisville, Ky.

12-14 AHA Institute, Directors of Hospital Volunteers (Advanced) AHA Headquarters, Chicago

(*Continued on page 16*)

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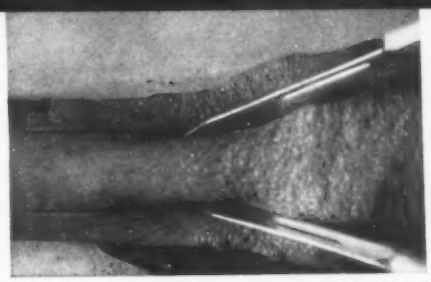

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CALENDAR OF MEETINGS

(Continued from page 14)

14-16 Louisiana Hospital Association, Capital House Hotel, Baton Rouge

15 Wisconsin Hospital Association, Schroeder Hotel, Milwaukee

19-21 AHA Institute, Labor Relations, AHA Headquarters, Chicago

20-22 Kentucky Hospital Association, Kentucky Hotel, Louisville

26-28 American College of Surgeons, Sectional Meeting, Hotel Peabody, Memphis, Tenn.

26-28 New England Hospital Assembly, Statler-Hilton Hotel, Boston

26-29 AHA Institute, Evening and Night Nursing Service Administration, AHA Headquarters, Chicago

27-30 AHA Institute, Nursing Home Administration, Miami Beach

APRIL

1- 6 American College of Allergists, Hotel Radison, Minneapolis

2- 5 American College of Obstetricians and Gynecologists, Palmer House, Chicago

6- 8 American Society of Internal Medicine, Benjamin Franklin Hotel, Philadelphia

6-13 American Academy of General Practice, Las Vegas

9-12 Aerospace Medical Association, Atlantic City

9-13 American College of Physicians, Bellevue-Stratford Hotel, Philadelphia

16-18 American Association for Thoracic Surgery, Chase and Park Plaza Hotels, St. Louis

16-18 American College of Surgeons, Sectional Meeting, Sheraton Park Hotel, Washington, D. C.

30-May 2 American Academy of Pediatrics, Spring Meeting, Statler-Hilton Hotel, New York City

MAY

10-11 American Pediatric Society, Traymore Hotel, Atlantic City

14-17 American Urological Association, Bellevue-Stratford Hotel, Philadelphia

14-18 American Nurses' Association, Detroit

20-25 National Tuberculosis Association, Deauville Hotel, Miami

21-24 Catholic Hospital Association, St. Louis

27-31 American Orthopaedic Association, Castle Harbor Hotel, Bermuda

28-30 American Ophthalmological Society, The Homestead, Hot Springs, Va.

29-June 2 American College of Cardiology, Denver-Hilton Hotel, Denver

JUNE

18-20 American Geriatrics Society, Palmer House, Chicago

21-25 American College of Chest Physicians, Chicago

23-25 American Diabetes Association, Conrad Hilton Hotel, Chicago

25-29 American Medical Association, Annual Meeting, Chicago

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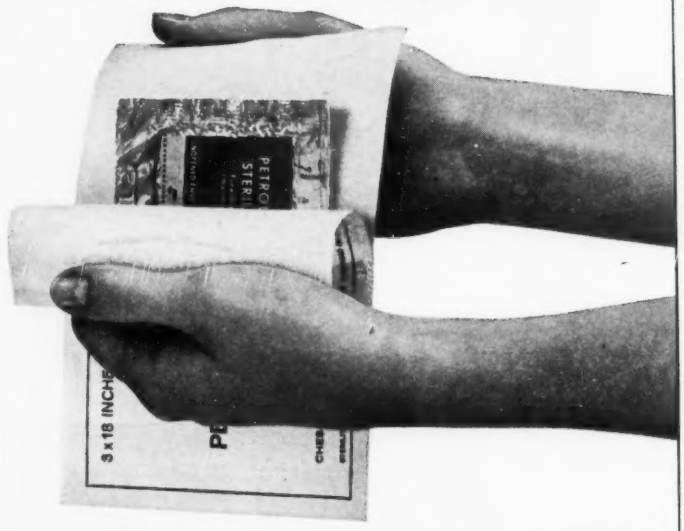

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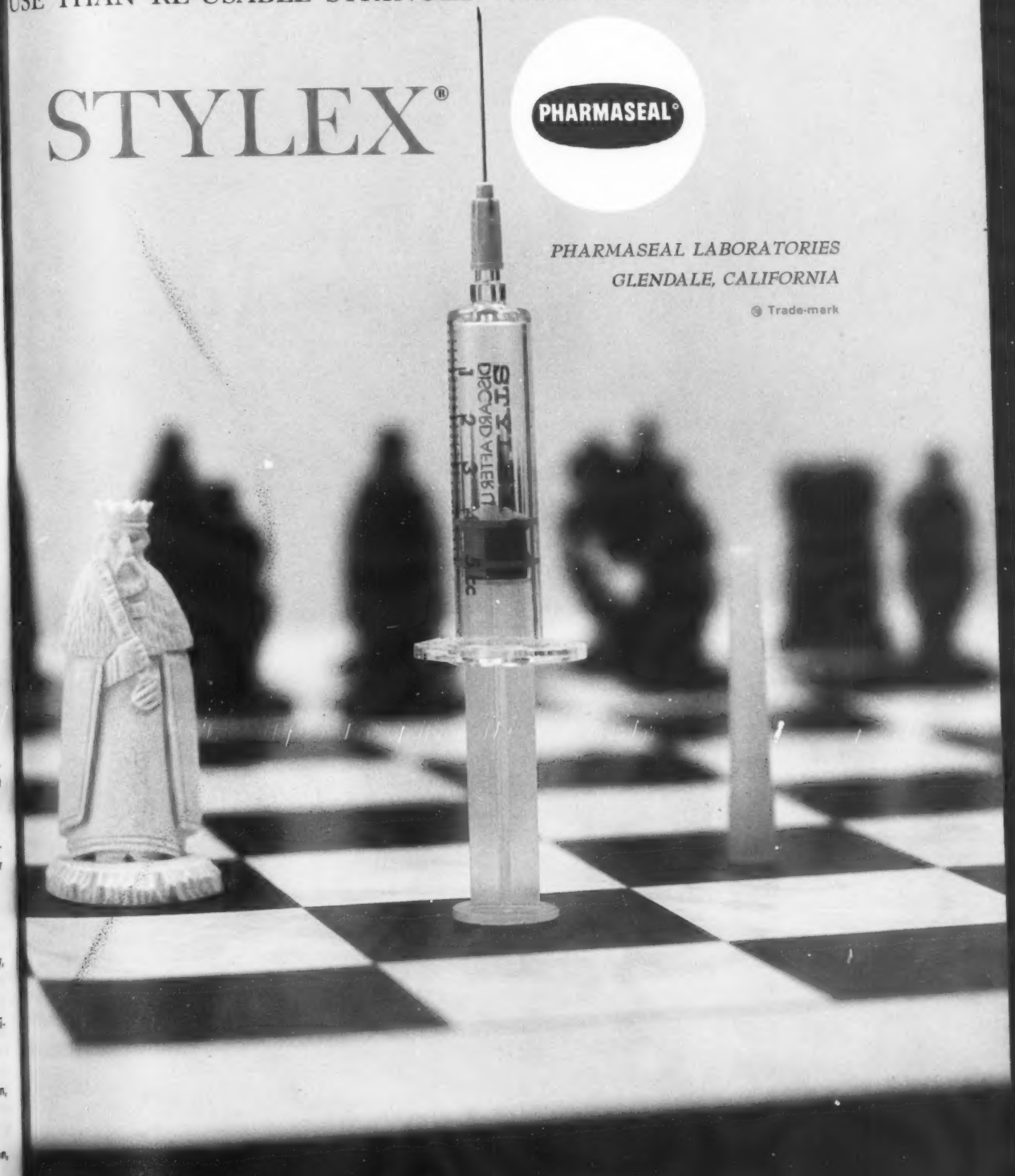

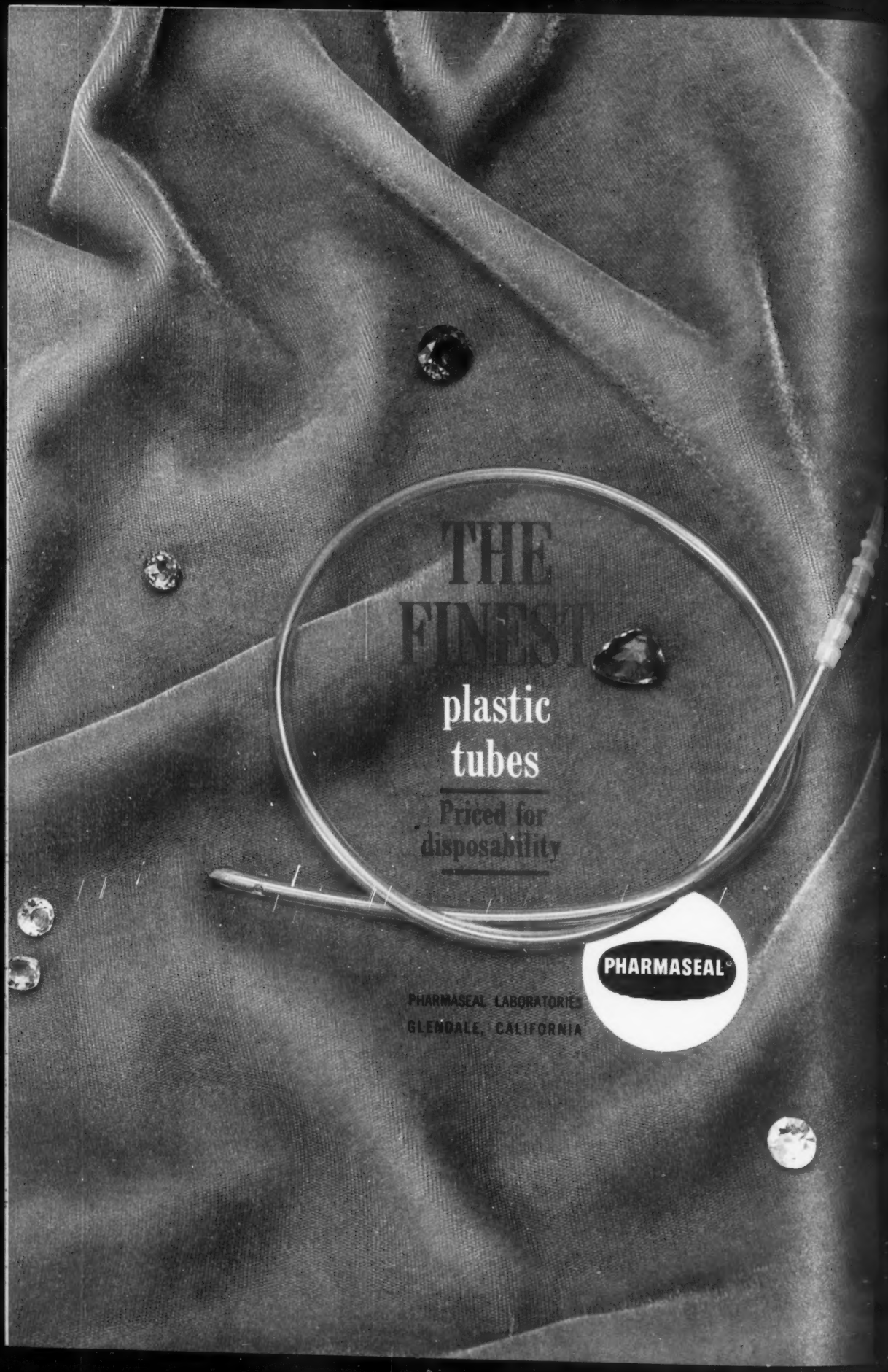
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HOSPITAL Digest SECTION

The University Hospital Internship in 1960*

By Richard H. Saunders, Jr., M.D.**

Condensed from The Journal of Medical Education, *June 1961*

Internships and residencies seem to be descended from the positions of "house surgeon" and "house physician" which were first created in this country toward the end of 18th century. From the very beginning the programs of these young physicians in residence combined considerable service to the sick with a chance to take responsibility for the hospital care of patients. Even the problem of terminology had arisen by the latter part of the 19th century, and such terms as "junior interns," "residents," "walkers," and "externes" were used in an attempt to differentiate among the various levels of the house staff hierarchy.

By the early 1900's it had been recognized that a period of hospital training after medical school was desirable for all physicians and not merely a privilege for the select few; by 1936, 15 medical schools and 19 states required an internship for degree and licensure, respectively. However, the interest of the medical schools in this phase of the medical education gradually became less definite, so that by 1955 none of them required the internship as a prerequisite for degree.

As the apparent interest of med schools in the internship decreased, the number of approved internships available in the United States increased enormously, so that by 1958-59, 853 approved hospitals offered 12,469 such positions. Since the number greatly exceeded the number of physicians being graduated from U.S. schools each year, the internship—already suffering from problems several decades old—was now beset with many new problems.

From the universities' viewpoint, however, one of the most serious problems lay in the nature of the internship experience itself and its relation to other years of medical education. As the "History of the AMA Council" states, "When the internship became a generally recognized part of the education of the physician some 40 years ago, it was designed to provide the graduate's initial contact with patients, including some responsibility for their care." However, after 1936 the clinical clerkship became the cornerstone of teaching in the clinical years of medical college. Thus arose a controversy over the need for, and advisability of, continuing the internship.

A partial answer to this problem was the introduction of straight internships, which came into existence in hospitals whose residency programs began to develop rapidly. However, straight internships do not, even now, constitute half of the internship positions available in the hospitals associated with medical colleges and, therefore, they do not answer the question whether "the internship" should be continued.

Inasmuch as the place of the intern in the major teaching hospital associated with a medical college has been challenged, and because medical educators are anxious to keep their programs abreast of the times, a study of internships in university hospitals seemed indicated.

Stated broadly, the objective of this study was to assess the educational quality of both rotating and straight internships in hospitals associated with medical schools as that quality is related to the undergraduate program on the one hand and to the residency on the other. Twenty-seven hospitals representing the clinical services of 28 medical schools participated in the study. These 27 hospitals (plus nine others with which the committee members were associated) appointed 1,496 interns in 1959-60, and of these, 1,200 (80 percent) completed a questionnaire as part of the study. In addition, we visited the hospitals, conducting interviews and observing procedures.

Some Conclusions: Should the Internship be Continued?

The answer to this question is partially a matter of semantics. For

(Continued on next page)

*This study was supported by a grant from the W. K. Kellogg Foundation to the Association of American Medical Colleges and supervised by its Committee on Internships, Residencies, and Graduate Medical Education.

**Cornell University Medical College, New York City.

The Intern and the Administrator

One of the areas considered in the study on these pages is that of the relationship of the intern to the hospital administrative staff. The following is a more detailed digest of this section of the report.

Although none of the interns in the study planned to go into hospital administration, it was surprising to learn that 35 percent of them had had no personal contact with the hospital administrator or his assistants. In addition, less than one-third felt they had learned anything concerning the role of the hospital administrator, the business side of running a hospital, or the relationship of the medical staff to administration and the board of trustees. Although 77 percent said they were familiar with the actual cost to patients of some medications, lab tests, and x-rays, 65 percent felt they could not make an informed judgment on a problem involving hospital administration and medical staff. At the same time, 68 percent thought it would be valuable to them in practice if they had some opportunity during a residency to learn more of this side of medicine.

To discover what factors promote antagonism toward hospital administrators so early in a house officer's career, two questions were asked the interns: "Does the hospital administration *seem interested* in problems that arise involving house staff; *e.g.*, satisfactory living conditions, stipend, providing necessary equipment?" The interns were about equally divided pro and con on this. And to the question, "Is the administration sufficiently aware of the house staff needs to solve this problem competently?" 52 percent replied, "yes," 42 percent, "no"; and 6 percent did not answer. It would appear, then, that hospital administrators, as a group, share the responsibility for the development of the attitude of antagonism. Administrators should discover the needs and problems of the house staff and apply themselves to their speedy solution before a small difficulty is magnified, in the house officer's eyes, into a major one.

Some of the serious criticisms the interns listed were:

—Admission procedures and policies resulting in poor timing of admissions so that a disproportionately large number of patients are admitted electively in late afternoon and evening when only part of the house staff may be on duty.

—Failure to employ competent or adequate number of ancillary personnel. It is highly important that both educators and administrators take cognizance of this problem, for the extra burden of work that falls unnecessarily upon the intern in this case was found to be seriously undermining the morale of the house staff and was calculated to make unpopular what otherwise were excellent internships.

—Failure to clarify sick benefits.

—Poorly organized or inadequately operated blood bank.

—Poor cooperation in obtaining autopsies.

—Failure to provide adequate house staff facilities.

—The lack of communication and understanding, failure to cooperate, and—on occasion—the open hostility which is permitted to develop between hospital administrators and the medical staff is totally unexcusable among men of education and mature judgment. Whereas the responsibility for this situation does not lie entirely with administrators, there are ways they can make a substantial contribution to promoting better graduate medical education.

1. Besides being competent in business matters, it is essential that they be sympathetic to the purposes of graduate programs. Whatever else a major teaching hospital may represent to its community does not alter the fact that if it purports to offer a first-rate educational program, the efforts of both administrators and medical staff will be required.

2. The administration must, then, have some first-hand knowledge of what such a program entails, for the whole internal milieu of a teaching hospital is different from that of its non-teaching counterpart. Administrators of teaching hospitals should be flexible in their concepts of how such an institution should be operated.

3. Mechanisms must be developed for providing some contact between house staff and administrators under conditions favorable to the development of a feeling of mutual respect. Interns must know that administrators are sincerely interested in their welfare and education and do not look upon them as "cheap labor."

Many additional items could be added to this list, but the essence of all of them would be the necessity for improved communication, understanding, and cooperation between professional staff and administration.

the vast majority of men, graduate medical education begins immediately after completion of the formal medical school curriculum. What should the first year be called —internship, residency, fellowship, or some new term? Two facts remain unchallenged in any discussion of this matter: (1) at the moment, a majority of states require completion of a satisfactory "internship" for licensure; (2) whatever it is called, the first year of graduate medical education must be provided by some agency. What we must decide is whether or not university hospitals should offer first-year programs, and if so how such programs should be organized and what they should provide.

For perhaps the majority of medical college graduates, the intern year is the *mid-point* of their formal medical education. To isolate the internship, to treat it as a thing apart, required by law but of no real educational importance, and to plan it in a casual manner, is to imply that we have created an educational anachronism for which we would like to disclaim further responsibility.

Several medical colleges have discontinued internships in their major teaching hospitals and have publicly expressed satisfaction with this move. However, there are certain real objections to such a step. Hospitals associated with medical colleges are in a position to offer graduates programs of the highest caliber, and they are morally obligated to offer as many such programs as their facilities permit. The propriety of forcing all men to spend their first graduate year outside the university environment seems highly questionable.

Neither the deficiencies of the senior year in medical school, or those of "the internship" can be solved by passing the entire responsibility for intern training on to staffs of private, community, and city hospitals unassociated with medical colleges. These institutions are exclusively committed to patient care for the community, and they are staffed by physicians who have acknowledged relatively little interest in teaching. The university hospital, on the other hand, recognizes the interdependence of patient care, teaching, and research. Therefore, rather than abandon in-

ternships, it would appear more profitable for all concerned if medical colleges redesigned both their senior years and the intern programs in their teaching hospitals to eliminate unnecessary repetition.

In brief, we believe that a revised concept of the internship should be adopted in hospitals associated with medical colleges, and we propose the following guide:

1. The internship, or first year after medical school, should be conceived and planned as part of a closely integrated formal program of medical education which begins on entry into medical college and ends with the completion of residency training.

2. To accomplish this, medical schools, through their faculties, should assume responsibility for all years of graduate education and training, including the selection of interns and the assignment of their duties.

3. The goals of each program should be determined primarily on an educational basis, and, where necessary, steps should be taken to improve or eliminate assignments which are educationally weak.

4. Assignment to some services, particularly subspecialties in certain hospitals, should be deferred until after the first graduate year.

5. All programs should introduce more flexibility into their schedules to meet individual needs and interests, while providing a balanced and fundamentally sound experience.

6. Twelve-month rotating internships should be sharply modified to lengthen the time on each service and to reduce the number of assignments, with the ultimate goal of eliminating one-year rotating internships and replacing them with longer, coordinated graduate programs.

7. More straight internships should be modified to permit assignment to another service or specialty when educationally appropriate to the intern's goals.

It is further recommended that, when medical colleges have wholly assumed the responsibility for the internships in their hospitals and have integrated them into a program of greater length, then all specialty boards should recognize the first year of education after medical school as a residency year, regardless of the name it bears. Failure of the boards to take such a step has fostered—and will continue to foster—the concept of the internship as an isolated and unrelated year of medical education. Taking such a step would immeasurably increase the status of the internship and help to give it dignity and value.

Furthermore, it was not originally the intent of specialty boards to dictate the precise patterns that graduate medical education should follow, but to safeguard the interests of the public by assuring that a physician who presented himself as a specialist did indeed have the necessary qualifications. If he can demonstrate to the boards that his knowledge and judgment reflect superb education in his field, then they should not be overly concerned with the details of the schedule he followed or the length of time it has taken him to acquire his knowledge and skills.

The foregoing synopsis presents a philosophy which is not really new and is hardly dramatic or radical in concept. It is hoped, however, that the amplification which follows may serve to emphasize certain areas wherein specific changes are urgently needed.

The Internship as Part of an Educational Continuum

One of the oldest principles of education holds that each phase should build upon the previous one and prepare for the next. Medical education seems unusually episodic in nature, and the internship phase is no exception. This is particularly true of certain rotating programs in which many duties repeat the experiences of the clinical clerkship without adding significantly.

It seems logical and essential that each department determine for itself that level of intellectual and technical achievement it desires in its first-year residents, and then design an internship experience which makes it possible for this level to be reached. The required conditions to this are most nearly approached by straight internships, for it is only in such programs that a department fully controls all the variables.

As a logical corollary of the philosophy of an educational continuum, a high percentage of interns should have the opportunity to stay on in a residency program of the same hospital.

In a small group of hospitals studied, selection of the interns was made largely by hospital administrators. This, probably more than any other single feature of the internship situation, indicates how far medical schools have gone in abrogating responsibility for this phase of medical education. Such a policy seems highly inconsistent with other policies and principles of medical schools. It is difficult to see why a medical faculty would be willing to accept responsibility for teaching men whom it had not selected, expose its students to their example, and be dependent upon them as a source of residents.

It is recommended, then, that medical faculties work out with hospital administrators (and, if necessary, with local government) an agreement which will permit the medical staff to select all interns appointed to their major teaching hospitals.

There are serious educational deficiencies in most 12-month rotating internships. One of the most urgently needed modifications is that of increasing the length of time spent in a single specialty. When all-inclusive programs are designed primarily to for reasons of "coverage" or to provide "exposure" to a field, they violate the principles of good teaching and result in a *potpourri* of experience which does not merit the name "graduate medical education."

While straight internships offer a greater potential for educational superiority, it is apparent that not all of them achieve this goal. Of major concern is the inclusion of certain assignments for service purposes which are insufficiently rewarding in teaching and experience. Of equal concern is the failure to allow opportunity for interested interns to take on additional work, participate in suitable clinical investigation, and expand their knowledge and experience. Whatever spark of intellectual curiosity appears in an intern should be fanned to a flame, not smothered by a schedule or the necessity to provide "coverage."

Nurse Staffing in Hospitals

By Eugene Levine*

Condensed from The American Journal of Nursing, *September 1961*

One of the most difficult problems in hospital nursing today is that of determining how many nurses are required to provide adequate patient care.

A recent review of staffing in the 5,300 short-term, general and allied special hospitals in the United States showed that the ratio of number of nurses to average patients census varied considerably among the hospitals. The most striking difference of all was between the 400 hospitals operated by the federal government and the 4,900 non-federal hospitals. The average ratio in the federal hospitals was 53.5 total nursing personnel per 100 patients. In the non-federal hospitals the ratio was twice as high—110.4 nursing personnel per 100 patients.

The large difference in staffing between the federal and non-federal hospitals raised these questions:

1. What are the factors which enable federal hospitals to operate with half as many nursing personnel per patient as do non-federal hospitals?

2. Do federal hospitals provide less adequate services than non-federal hospitals because of lower staffing?

3. To what extent is lower nursing staffing in federal hospitals indicative of greater administrative effciency?

To find the answers to these questions, one federal and two non-federal hospitals were selected for intensive study. The three hospitals were matched as to: size—between 210 and 250 beds; type of service—short-term general; and absence of a school of professional nursing.

The major difference between the hospitals is that in the fall of 1959, when the study was run, the federal hospital employed 49.9 nursing personel per 100 patients, whereas the non-federal hospitals maintained the much larger staffs of 113 and 125 personnel per 100 patients.

Results from our study show:

About 20 percent of the difference in staffing was explained by the fact that patients in the federal hospital were less acutely ill than patients in the non-federal hospitals and, therefore, had fewer requirements for nursing services.

Another 20 percent of the difference was attributable to the fact that personnel in the federal hospital reported a greater number of omissions in nursing services to patients than personnel in the non-federal hospitals, and thus the federal hospital appears understaffed.

An estimated 22 percent of the staffing difference seemed to be due to certain organizational characteristics of the federal hospital that were not necessarily indicative of greater efficiency since they could not be feasibly adopted by the non-federal hospitals.

However, 30 percent of the difference was estimated to be attributable to practices and policies which did seem to be indicative of greater administrative efficiency in the federal hospital. This is a sizeable portion since it represents nearly 20 nursing personnel per 100 patients. Thus, it would appear that a hospital with a smaller work force than another could meet the same work load and attain a comparable level of adequacy of services because of greater administrative efficiency.

The specific features of the federal hospital that make for greater administrative efficiency—as defined in our study—are:

1. Simplified organizational structure using larger and more homogeneous bedside nursing units.

2. Use of flexible patterns of assignment of personnel which will more closely match staffing to patients' requirements.

3. Establishment of practices that relieve the nursing department of essentially non-nursing responsibilities, such as the use of ward clerks.

4. Employment of personnel with sufficient experience and educational preparation to be capable of

*Chief, statistics and analysis branch, division of nursing, Public Health Service, Department of Health, Education, and Welfare, Washington, D. C.

Hole in the Ground Solves Problem

Radioisotope material represents a problem in that expensive shielding devices such as lead-lined safes or specially constructed wall vaults are required for storage. *Texas Hospitals* reports on an ingenious and inexpensive solution to this problem: a hole in the ground. In the new Tucson Medical Center the radioisotope center is on the ground floor—so they simply dug a hole, lined it with a minimum amount of lead, and used the natural surrounding earth for insulation. A thick lead lid served as an adequate shield for the upward radiation, and the whole inexpensive device fits into one corner of the room, taking up virtually no space. Other hospitals with isotope labs on the ground floor or on an outer wall could save many dollars using this safe storage technic.

making independent decisions in their work.

5. Maintenance of an attractive personnel system to promote stability of staff.

6. Establishment of "organizational memory" through documentation of objectives, policies, procedures, and accomplishments, to facilitate coordination and continuity of operations.

7. Use of structured channels of communications such as committees and conferences to exchange ideas and information.

8. Encouragement of participation in administrative processes of all nursing department members.

9. Participation of the nursing department in the process of budgeting, which provides an instrument for systematic planning and gives insight into the financial impact of the operations of the nursing department.

10. Use of a continuous system of reappraisal to seek ways of improving utilization of personnel.

It is interesting to speculate what a saving of 20 personnel per 100 patients would mean to the total universe of non-federal hospitals. Since there is today an average daily census of 450,000 patients in all non-federal hospitals, the ratio of 20 nursing personnel per 100 patients represents a theoretical work force of 90,000 nursing personnel.

The conclusion to be drawn is not that these personnel are unnecessary and that their positions could be eliminated with improvements in administrative efficiency. Rather, the conclusion is that, with more effective use of the skills of nursing personnel currently employed in hospitals, productivity could be increased to help close the gap between nursing needs and supply.

Thus it is strongly suggested from this study that the nursing shortage does not consist entirely of lack of sufficient numbers of personnel, but may also be attributable in part to the nature of the administration of nursing services.

Revitalizing Hospital Planning

By Gordon R. Cumming, M.A.*

Condensed from American Journal of Public Health, *August 1961*

In the United States today there is active pressure to make significant changes in the voluntary hospital system. Rapid medical advances have created scientific and technical competence to provide health services which we have not learned how to organize and manage to our own fullest benefit. And the public considers health services to be of such major importance that they should not be entrusted to the exclusive control of physicians, hospitals, and people in public health.

Since public attention is focused at times very dramatically on health services, we need to examine problem areas. There is no doubt that lack of coordinated hospital development has produced duplication of expensive services, gaps in essential services, duplication of facilities, competition, inappropriate use, over-building in some areas and under-building in others.

The issue we face is that of developing a method to mobilize the interest and force of the public, the health professions, hospitals, other voluntary agencies, and government in a manner which will produce the most effective public service.

Since complex and sensitive relationships are involved, it is probable the solution will vary in different states, depending on the traditions and relationships which are part of the regional environment. But regardless of the particular mechanism which is developed, some primary concepts need to be kept in mind:

Hospitals and related health institutions are a vital component of medical care. And as medical science continues to advance, the role of the hospital will become ever more important. The community hospital today has a responsibility to function as a center for comprehensive health care in the community. One of the hospital's missions should be to extend its responsibilities through programs for those who are not occupying beds.

The relationship between doctors and hospitals needs clarification. In theory, this relationship is very clear; but not so in practice. The hospital establishes many controls and checks on medical practice within the institution. A hospital also has basic legal responsibility

(Continued on next page)

*Chief, Bureau of Hospitals, State Department of Public Health, Berkeley, Calif.

from a liability and malpractice standpoint.

The public nature of service provided by hospitals needs to be recognized also. This means that hospitals' primary responsibility is to provide community service, with business and financial aspects of their operation secondary.

Hospitals and other health facilities are not components of a highly organized system which functions under central control and direction. Many types of hospitals and forms of sponsorship are involved. One important factor is that the general hospital, as the point of most frequent public contact, is the key institution in the organization of hospitals and related health facilities. Its central coordinating role under effective community planning cannot be overemphasized.

Gaining the most effective and appropriate use from all health resources begins with planning. This planning needs to reflect local, regional, and state-wide viewpoints and to be participated in by voluntary groups and official agencies. Some of the specific issues to be met in this planning include:

—Establishment of long-range objectives for all regions in each state, including projecting population growth.

—Defining the characteristics of hospitals which are planned in each community in terms of their size, number, location, and mission.

—Including at least three levels of planning for: (1) community hospital service; (2) specialized service within large geographical regions; and (3) provision of medical and related education.

An appropriate beginning in planning is to establish in each state (varying from one state to the next, as suitable) a legal basis under which official public responsibility for leadership in hospital development and service is created.

In some instances voluntary organizations have developed the nucleus around which planning and leadership can be built. In other situations, primary planning activity has been undertaken by government. Much value can be gained from the experiences of both approaches.

At any rate, clear goals must be established for each region or community and hospitals must be induced to comply with these goals. As a final suggestion, one way of achieving this is to establish by law regional councils with responsibility to develop long-range community plans based on systematic collection of precise information on hospital use.

An interview with Father John J. Flanagan, S. J.*

CATHOLIC HOSPITALS TODAY

By Rhea Felknor

Condensed from Ave Maria, National Catholic Weekly, *June 10, 1961*

Q. Criticism of hospitals and their staffs seems to be increasing. Why do you think this is so?

The public is more interested in hospitals today than 10 years ago, and rightfully so. People are more inclined to be alert to hospital problems and to make judgments. And they're better educated and better versed on health affairs.

Q. Isn't the increase in hospital costs one reason for greater criticism?

Hospital costs definitely should have gone up. Certain factors in hospital care had to be adjusted. We are encouraging our hospitals today to pay a just wage to all types of employees. And the pattern of employment has changed from the 52-hour week to the 40-hour week. This is right; but it is necessarily reflected in costs.

Q. Perhaps the amount of charity work Catholic hospitals perform is one reason hospital costs are so high?

No, I don't think so. The cost of charity is a very minor factor in the increase of hospital costs. For one thing, hospital insurance plans have reduced the number of people who years ago would have had to be taken care of on a charitable basis.

Q. What percentage of a hospital's work is charity?

It's difficult to get figures on this. We think the minimum is perhaps 10 percent of the total volume. It might run much higher; it depends on the locality. I am convinced hospitals do much more charitable

*Father Flanagan is executive director, Catholic Hospital Association, and executive editor, *Hospital Progress*.

Identification by Ear

Current Medical Digest reports on a study in which photographs of the right and left ears of 206 infants (all born by cesarean section) were taken daily from the day of birth to discharge from the hospital. The study determined the ear to be a reliable and standardized identification: the ears of different sample babies are always unique and researchers found enough variation in ear forms to distinguish *visually* the ears of one baby from those of another.

work than they are given credit for.

Q. In some cities Blue Cross officials have charged some of their insured members are going to the hospital when they really don't have to. Is this sort of thing responsible for increasing hospital costs?

This charge is unreasonable. The majority of people in a hospital are anxious to get out as quickly as possible. Doctors are anxious to have them leave so beds will be available. Certainly there will be individual cases of abuse. But we also have to realize that Blue Cross insurance is for the benefit of sick people, and there are instances in which it might be impractical and unreasonable to demand an individual leave a hospital bed just as soon as he is medically able.

Q. Isn't it a fact that the existence of the medical insurance program, has induced hospitals to raise their rates?

No, the insurance programs have actually enabled the hospitals to keep rates down. Through the program, hospitals today can expect to receive pay from a much higher percentage of patients than they once did. They don't have such a deficit of charity to count on.

Q. Is the average patient demanding better service than he would have in 1920 or 1930?

I don't think people are demanding a great deal more, but is more difficult to render service today than it was 20 years ago. The spirit of independence and lack of responsibility and reliability that characterize so many people giving service today has had its impact on hospital personnel, too.

Q. Are hospitals in danger of becoming so expensive that only the rich will be able to afford them?

The wealthy will always be able to pay for their care. The middle-class people are going to be able to obtain their care with the help of Blue Cross and other insurance plans. The poor people will always be taken care of in some way—they always have, and they always will.

Q. Why are hospitals so rigid about prompt payment?

I don't believe the majority are unreasonably rigid. We have the unfortunate case where an individual is not treated well, or the individual institution unfortunately has a nonrepresentative credit manager or cashier. Hospitals are expected to have efficient management, and they are severely criticized by the public and businessmen if they do not have good business methods.

Q. Do hospitals have problems with fake charity cases?

The hospital continually has the problem of determining who is the destitute patient and who is the chiseler. More and more, hospitals are attempting to adjust their business office procedures in keeping with modern business trends. They are recognizing they must be able to provide monthly payment plans. A good credit manager can work out a satisfactory plan for paying a hospital bill with an uninsured person if he is employed. If he is completely indigent, the care will be written off as charity.

Q. Do you think patients paying hospital bills in installment plans is a good thing for Catholic hospitals?

I'm convinced the majority of our hospitals are moving into monthly payment plans. Credit plans can never take the place of prepayment plans; when these are available people should use them rather than having to resort to burdensome credit arrangements. But we're all for installment paying in cases where prepayment plans won't cover the whole bill.

Hospital bills can be a source of fear and concern to the uninsured individual. We ought to do everything possible to protect him and his family. But frankly, I don't think we can hope to reduce the charges for hospitalization significantly.

After all, hospitals are fairly well managed right now. Any improvements in this area can be responsible for only a small decrease in over-all hospital costs because these costs represent hard money paid out in salaries, supplies, and equipment.

Q. How would the salary of an administrator compare with the salary of a business-firm executive whose company did a similar gross?

I think an experienced administrator in a non-Catholic hospital would get from $15,000 to $20,000.

Laymen assisting in the administration of Catholic hospitals can expect to receive reasonably good salaries.

Q. I'm curious about integration of races in hospitals. Some Catholic hospitals are still segregated.

The majority of Catholic hospitals have the policy of taking people regardless of race or creed. There are sections of the country where this is controlled by legislation.

Q. Do you mean the Catholic hospitals would be closed if they accepted Negro patients?

It would be a violation of state laws.

Q. Is the decision to integrate entirely up to the hospital administrator?

The administrator can do nothing about it in sections of the country where segregation is controlled by law. It is up to the administration of the hospital, otherwise, to determine policy on this. However, it is also up to the doctors in the community to determine whether or not they are going to bring colored patients into the hospital.

Q. What is the biggest problem facing Catholic hospitals today?

The complex problem of combining a Christlike spirit of service with professional and administrative excellence.

Condensed from The Reader's Digest, *September 1961**

Is There a Doctor in the House?

By Lois R. Chevalier

Recent concern over the loss of foreign doctors who were not able to qualify in the ECFMG examinations has obscured a much more significant fact: 79 percent of the nation's hospitals, containing half of our hospital beds, are not approved for training interns or residents anyway. What are *these* hospitals doing about 24-hour medical coverage?

A recent survey of general hospitals by the American College of Surgeons indicated that more than half have no doctor regularly present in the building. Most are making do with an on-call system the effectiveness of which is highly debatable.

Hospitals that want something more than an on-call system have tried organizing their staff doctors to sleep-in on a rotating basis. But since the average private physician already works a 60-hour week, and may serve on the staffs of several hospitals, it is easy to see why many doctors are not enthusiastic about this arrangement.

Hiring young doctors to work for a year or two before they go into private practice is sometimes suggested as a solution. But:

"To cover for 24 hours," says Dr. John C. Nunemaker, AMA Council on Medical Education and Hospitals, "you'd need at least three young doctors in each hospital. Multiply three by several thousand hospitals—and where are all those men coming from?"

One answer to the shortage might be a radically new way of looking at the doctor's job. Dr. Charles L. Hudson of Cleveland has opened a whole new line of inquiry by saying, "The manual part of medicine is pretty easily learned—perhaps someone with less training should do that. We need doctors to do the reasoning, the making of comparisons, the analyzing."

Dr. Hudson proposes a detailed analysis of all work done in the hospital by doctors and nurses. With this information codified, medical leaders could decide just how much training is needed for each function and which functions doctors could safely delegate to others with proper supervision.

Presently, unplanned, helter-skelter delegation is rife in the nation's hospitals. For example, 60 percent of the hospitals surveyed by the American College of Surgeons permit a nurse to give treatment in the emergency room after telephone consultation with a doctor. Whether the doctor will come in person depends on the accuracy of her report to him. If she misses an important symptom, he can make a wrong decision.

Some hospitals have hired men from the Army and Navy medical corps who have been trained to do medical tasks under emergency conditions. While they may be competent at giving intravenous medications, starting blood transfusions, and helping in the operating room, there are as yet no clear limits set for them. (The demand for them is perfectly clear, however; I heard of one such unofficial medical helper who was so valuable that he was paid $15,000 a year.)

The shortage of doctors has driven some hospitals to make questionable use of medical students who need to earn money. In some hospitals, young men with two years of med school are doing work that interns used to do.

The need for more medical help is so urgent that some hospitals are hiring foreign-trained doctors who flunked the qualifying exam and were dismissed from approved hospital-training programs. Private doctors who are delegating work to these men are faced with a sticky task in deciding just what to let them do.

In short, the unordered arrangements now in effect in many hospitals simply underscore the fact that there is a critical shortage of doctors to do doctors' work. Nor, of course, is the situation likely to improve in the near future.

That is why Dr. Hudson is proposing that the medical and nursing professions reappraise their own duties and those of their non-professional helpers.

Perhaps his most startling proposal is for a totally new kind of hospital worker, a person who is given more responsibility than a nurse, yet works under the supervision of doctors. Dr. Hudson would call these people "externs"—a term now applied to medical students working in hospitals. Dr. Hudson thinks ambitious nurses might want to take extra training to become externs, but he also suggests taking young men with three years of college work and giving them a year of hospital training.

A well-trained extern or "super-nurse," briefed by a doctor on a particular case, might be able to make provisional medical decisions. He could order medication stopped if a patient was reacting badly to it, or could institute treatment for shock, or give a hypo for pain.

The AMA has announced the appointment of a new committee to study the problem, so that the makeshift arrangements now in effect in many hospitals may be overhauled and made safer and more orderly. If the situation is to be regularized, the public must understand that delegation of some medical tasks is an unavoidable necessity. Then the shifts in responsibility can be carefully planned and made in an aboveboard way, with recognized standards and safeguards.

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ital Topics

Hot Weather, Lukewarm Activities Mark 1961 AHA Convention

The sun shone brightly throughout the 1961 AHA convention in Atlantic City, and the weather in the House of Delegates was generally as peaceful as that on the boardwalk. Delegates took no startling action. On two key topics which have caused lively discussion in past years—health care of the aged and accreditation of nursing schools—they voted to maintain the status quo.

There was more activity in the convention hall. Many of the 13,700 registrants had some complaints about the lack of air conditioning in the exhibit area and crowded meeting rooms. Nevertheless, so eager were they for information that many stood throughout entire sessions. Particularly popular were programs dealing with effective use of personnel—their orientation, evaluation of their performance, the training of supervisors.

Strong interest was evident also in the increasingly important topic of nursing homes and the hospital's role in their improvement. And even the technical subject of automatic data processing drew a roomful of people. All in all, the meetings seemed to be much better attended this year than they have been at many previous conventions.

The House of Delegates, in reaffirming the policy on health care of the aged which was adopted in 1958, was acting in accordance with a recommendation of the AHA board of trustees. (The policy states that "every realistic effort should be made to meet the hospital needs of the retired aged promptly through mechanisms utilizing existing systems of voluntary prepayment. It is conceivable, however, that the use of social security to provide the mechanism to assist in the solution of problems of financing these needs may be necessary ultimately.")

It was agreed that a special task force, representative of the AHA and Blue Cross Association, should study the issue thoroughly and report its findings to a special session of the House which will be called as soon as possible.

Though this action had already been taken, the House then, to conform with parliamentary procedure, had to untable an amendment calling for support of the social security mechanism, which had been introduced last year by Martin R. Steinberg, M.D., and tabled. After this amendment was read to the delegates, its sponsor, director of Mount Sinai Hospital, New York City, rose to lament the absence of discussion before the delegates' endorsement of the trustees' statement, and urged that discussion be held.

Past president Albert W. Snoke, M.D., director, Grace-New Haven Community Hospital, New Haven, Conn., praised Dr. Steinberg for his courage and said he hoped the issue would be properly defined in December.

The slow progress in implementation of the Kerr-Mills Act was commented on by Dr. Steinberg and also by R. Ashton Smith, Massachusetts delegate, who called the means test a threat to the program's adequacy.

Nursing-school accreditation—a hot issue in 1958 and 1959—caused hardly a ripple in the 1961 sessions. Delegates accepted the report ably presented by the new AHA president-elect, T. Stewart Hamilton, M.D., director, Hartford (Conn.) Hospital, in his capacity as chairman of the Council on Professional Practice. Dr. Hamilton said that on the basis of achievement, the AHA board of trustees has recommended that the NLN committee on accreditation and the AHA-NLN interorganizational committee be considered satisfactory and be permitted to continue to do their work.

Dr. Hamilton noted with favor that cooperation of administrators and directors of nursing seems to be improving on the local level. One evidence of this, he told a convention session on accreditation, is that surveys returned in 1961 were usually signed by both persons, whereas in 1958 they were usually signed by one or the other.

Another encouraging sign, he said, was that 88 hospital administrators were among the 950 who attended the 1961 meeting of the Council of Member Agencies. Only 40 attended two years ago.

The weaknesses of the program as revealed in the 1961 survey are the same as in 1958: standards, surveyors, fees and costs, reports and applications, and administrative procedures, Dr. Hamilton reported. However, standards now rank first, whereas the most often reported weakness in 1958 was fees and costs. The inadequacy of surveyors also ranks considerably higher on the list of weaknesses than it did three years ago.

Dr. Hamilton had some encouraging words about foreign medical graduates. Noting that 68.8 percent of the 7,800 taking the ECFMG examination in April made

Opening remarks of Dr. George E. Godber, C.B., chief medical officer, Ministry of Health, London, drew chuckles from Jack Masur, M.D., center, new AHA president, and Luther L. Terry, M.D., surgeon general, Public Health Service, Washington, D. C. Session was devoted to British and American views on public health planning.

scores of 70 or better, he told delegates that if this percentage continues, more people will have passed this year than there were foreign graduates in the country last year.

Other actions by the delegates included endorsement of a statement setting forth the goals, meaning, and implementation of the hospital-Blue Cross partnership, and approval of the continuation of the hospital counseling program as a "membership service" upon termination of the contract with the Hospital Research and Educational Trust.

Delegates also voted a six percent dues increase to finance expansion of AHA programs in 1962.

Abstracts of selected speeches from the convention sessions follow.

British and American

British Public Health Planning Has Wide Social Service Pattern

Dr. George E. Godber, C.B., chief medical officer, Ministry of Health, London, England:

The National Health Service of Britain did not introduce a lot of new services not previously available, but took over the responsibility for providing, coordinating and developing services which existed before 1948. It created a new administrative framework for the management of all hospitals, enlarged the scope of the personal preventive and care services of local government agencies and modified the local organization. It widened the content of general practitioner services which were also extended to all persons. Formerly only insured workers had such services without payment in some form at the time of receipt.

In Britain, therefore, any planning of health services starts from the assumption that what is needed will be provided without payment for treatment, either in proportion to the service received or at the time of receipt.

Health care depends first and foremost upon the general practitioner. Everyone is entitled to the services of a family doctor, and probably at least 49 out of every 50 of the population have enrolled with a doctor and look to him for first line medical care in all ordinary circumstances. He is not expected to provide specialized care at hospital, but it is his responsibility to decide whether and when such services are needed and to arrange for them.

Curative medical work in Britain is thus divided between two distinct groups of doctors—whose who work wholly or mainly in hospitals and are either trained specialists, specialists in training, or relatively recently qualified doctors, and general practitioners working wholly or mainly outside hospitals, with the ratio just over half general practitioners.

Hospital and specialists' services are not the only support required. Good home care requires other resources. The large local authorities, councils of cities and counties, provide nursing, midwifery, domestic home help and welfare services and are responsible for immunization campaigns and for ambulance transport.

The apparent weakness in the system is often said to be the threefold pattern of administration. A single authority, it is sometimes claimed, could better organize a comprehensive health service. But the monolithic pattern is not necessarily strong; it can be a guarantee of immobility we do not seek. In all fully developed health systems, the major effort and expenditure must go into hospitals because they use the complex methods and provide intensive care. They might easily dominate the health field to the exclusion of the first line care in the home and the preventive services. Yet the population's first need is care in the home and this, well provided, should prevent needless burden on the hospitals, which essentially provide a supporting, not a primary, service. That is the main motive of our planning.

America Has Complex Governmental Plus Unique Voluntary Structure

Luther L. Terry, M.D., surgeon general, Public Health Service, U.S. Department of Health, Education and Welfare, Washington, D.C.:

I conceive national health goals as objects of purposeful action in which all parts of the society participate, each playing a distinctive role in cooperation with the others. In the United States, that concept implies a role for the federal government to harmonize conflicting opinions through the formulation of public policy and to assure nationwide, though not always uniform, action toward the goal.

During World War II American statesmen learned that health was no longer a minor concern of the American people. Our war experience had shown what organization—freed from habitual patterns—could accomplish for military and civilian health and we could not go back to prewar goals for national health.

National policies and programs for the construction of hospitals and the expansion of medical research were enacted into law before the close of 1946.

The provisions of the Community Health Services

and Facilities Act of 1961 enhance our opportunities to cope with some of our changing demands. The provisions for research in hospital administration, nursing home construction, grants to states for the chronically ill and aged are among the significant steps taken.

We have learned much; the sharpest lesson is that there are large areas of unmet need. We need action along three salients simultaneously: 1) health insurance for the aged beneficiaries of our Social Security System; 2) increased production of professional health personnel; 3) increased development of community services and facilities. A fourth need is the efficient organization and utilization of our economic capabilities, our health personnel, facilities and funds.

Our national effort in health and medical fields tends to exert a centrifugal rather than a centripetal force. It tends to throw the responsibility for planning and action out to the periphery of need and association. It greatly complicates the task of planners and almost guarantees disturbing variations in the quantity and quality of services available to the people.

I believe, however, that the very difficulties engendered by our administrative system offer advantages which we have scarcely begun to exploit. They *demand* effective planning.

Where we have been most effective, we have accepted the concept, that *public responsibility* for health in our country means governmental *and* voluntary responsibility; both forces reciprocally active, reciprocally responsible.

Hospitals in a Changing Economy Will Face Even Greater Challenges

Merton E. Knisely, administrator, St. Luke's Hospital, Milwaukee, Wis.:

Hospital finances have never been in a greater state of foment. The rapid rise in hospital and Blue Cross coverage has in itself raised questions of inefficiency and waste. High costs, very poorly understood by the layman, have become a conversation piece. We must spend more time and money informing the public; we must establish our own posture instead of letting Blue Cross and other studies create our image.

We are in a period of rapidly improving research and practice, changing community patterns, and improved hospital practices. The things that are going on in research are tremendous, and some of them have already moved into hospital practice.

The electronic microscope, monitoring during surgery, electronic diagnosis—these are not unfamiliar to us, yet they are almost totally unknown to the lay public. We recognize that hospitals will need special laboratories for new psychological studies; that nuclear medicine will bring new changes, and technics. Currently, we have 400 new drugs per year; we expect more, and we expect them to be more complex, bringing more sub-specialties.

Another area of concern in which we must inform the public so that we can go ahead with some mutual understanding, is in changing community patterns. With more of our population attaining a higher education, we will have more utilization of our services, and will need to shift from self-sufficiency to greater interdependence.

A question from the floor gets thoughtful reaction from the panel on Formal vs. Informal Organization. William S. Brines, center, director of Newton-Wellesley Hospital, Newton Lower Falls, Mass., chaired the session. On the left is Walter J. Rome, executive director, Children's Hospital of Pittsburgh, Pa.; on the right, Harvey Schoenfeld, director, Barnert Memorial Hospital, Paterson, N. J.

The disposable income is expected to go up still further, with a readiness to spend on hospitals and hospital coverage. Our still shifting population centers will make us a more mobile nation than ever before. The utilization of beds as related to the age of patients finds us heading towards the middle-aged and golden-age groups.

As an industry, we must be cautious not to be saddled or regulated, as are railroads, by ICC or state commissions.

Formal vs. Informal

Formality is the Price Large Organizations Pay for Bigness

Walter J. Rome, executive director, Children's Hospital, Pittsburgh, Pa.:

By an informal organization I do not mean one lacking structure. The character of the organization I represent is not mine; we have written guide lines in all departments. By informal I mean that by our administrative attitude we are trying to avoid fitting persons into preconceived molds.

Most programs developed by large companies such as Bell Telephone, for instance, depend on several thousands of executives. It is impossible for one man

Hospitals in a Changing Economy were discussed by, l. to r., Merton E. Knisely, administrator, St. Luke's Hospital, Milwaukee, Wis.; John E. Peterson, administrator, Alta Bates Community Hospital, Berkeley, Calif.; and Stanley A. Ferguson, director, University Hospitals of Cleveland and AHA trustee.

to organize such companies in an informal manner, hence their heavy reliance on organization charts and programs to develop key people.

In smaller organizations it's still physically possible for one man to really head the organization. You must be formal if you can't communicate in other ways. Our goal is not the production of charts, but of an efficient organization.

Aren't personnel inclined to function better informally than through charts and writeups? We find this to be so. Our department heads have the authority to develop themselves and their employees to their maximum capabilities. They work with the full knowledge of administration and budget, and are given credit for what they do. We find this informal atmosphere essential for the development of leadership.

Organization is an Art, Requires Technics Based on Principles

Harvey Schoenfeld, director, Barnert Memorial Hospital, Paterson, N. J.:

There is no such thing as "informal." Webster defines the word as "not according to fixed customs, rules, etc." He defines organization as "the executive structure of a business; the personnel of management, with its several duties and places in administration; the various persons who conduct a business, considered as a unit."

The attempt to combine these two definitions is typical of the confusion of the so-called informal organization.

Organization is an art and must have technics based on principles, and technics are acquired. Informal associations exist where two or more persons gather. If the contact is fleeting, the association remains informal. But common goals and how to realize them have structured themselves into an organization. Rules and customs may be unwritten, but they are clearly understood.

People want to be led, but they want a strong leader, with just rules for all. One of the responsibilities of the formal organization is to avoid the power struggle, the overlapping in the working of its parts; another is to encourage the development of proper allocation of duties and create channels of communication.

Hospital management is a structure in transition. No department can be autonomous. Overlapping results in a lack of decision-making and poor morale.

Hospital-Doctor Relations

Clearcut Lines of Communication and Accountability are Imperative

Kermit H. Gates, M.D., director, Dade County Department of Hospitals; executive director, Jackson Memorial Hospital, Miami, Fla.:

The relationship between the organization and the medical staff is a vital problem. As long as doctors are rugged individualists and administrators probe, the two probably will have differences.

The specific needs of patients must govern the organization of a hospital. The interpretation of the hospital to the patient by the doctor helps understanding—but first the doctor must have understanding rapport with the hospital.

It is accepted that clearcut lines of communication and accountability must exist, with the trustees the center of authority. The lines must be definite and well understood. The prime function of administration is to determine who is responsible for what in *writing*. The chain of command must not overlap, must not be contradictory nor vague.

What can the medical staff expect of administration? Assuming doctors rarely receive formal instruction in administration, we can expect varied viewpoints on this. Certainly, however, they can expect smooth-running facilities and equipment, financial support, and moral support for patient care.

What can administration expect of the medical staff? It can expect professional, administrative and social duties. It can expect the doctors to assume more responsibility for coordinating medical care and management.

Any effective relationship is based on communication and understanding. The impetus is up to administration. Doctors must be taught how to participate. An open door to administration for students, residents and staff: attendance at medical meetings; talks with individual doctors and postgraduate programs are all helpful. The

Effective Organization for Administrator-Medical Staff Relationships is a subject of many opinions and conflicts. One opinion from the floor was appreciated by panelists, l. to r., Kermit H. Gates, M.D., director, Dade County (Fla.) Department of Hospitals; Morris F. George, executive director, Abington (Pa.) Memorial Hospital; and Richard W. Blaisdell, administrator, Peninsula Hospital, Burlingame, Calif.

Arthur Larson, D.C.L., (left) director, World Rule Law Center, Duke University, Durham, N. C., spoke on "An Audacious Agenda for America." He recommended we set ourselves specific goals, "not as arrogant as reshaping the world, and not as timid as merely getting through the next weekend . . but goals that will carry entire new segments of our economy, society or international relations to new levels that are both realistic and inspiring."

Hospital and Medical Economics in the Mid-Century were explored by Odin W. Anderson, Ph.D., center, research director, Health Information Center, New York City, and right, Walter J. McNerney, president, Blue Cross Association, Inc., Chicago. Tol Terrell, left, administrator, Shannon West Texas Hospital, San Angelo, was chairman of the session, rated one of the convention's best by audiences.

policy that only administration can say "no" to a medical staff man will do much to bring them into the circle of cooperation.

Conference discussions between the medical staff and trustees are not sound. Some doctors feel expert in all lines, but they are poorly informed on administration and get into trouble with trustees.

Hospital-Medical Economics

Today's Decisions Must be Based On Facts to Reduce Error Factor

Odin W. Anderson, Ph.D., research director, Health Information Foundation, New York, N.Y.:

Ten or 20 years ago, decisions to build a new hospital, expand an existing one, increase unit price of services, and other matters, were made "by the seat of one's pants." Those days are gone forever. Decisions are increasingly made on the basis of factual information in order to reduce the margin of error.

Industry has its departments of research and development. Research can now be an effective tool for us in the hospital field because we have a broad enough consensus of the need for health insurance, bed ratios, hospital areas, and criteria of use.

Research can assist in formulating policy in these basic matters, and in exploring problems inherent to administration. The rate increase request of the Blue Cross of Michigan triggered reaction by government, hospitals, labor, and citizens committees.

To explore the underlying problems, the University of Michigan undertook a study headed by Walter J. McNerney, of Blue Cross, and financed by a grant from the W. K. Kellogg Foundation.

The report, which Mr. McNerney will discuss, is an excellent example of fact-finding, and Michigan now has a resource from which other states can profit inasmuch as the difference in states' problems is a difference of degree only.

Each Problem Must be Viewed in Relationship to the Overall Problem

Walter J. McNerney, president, Blue Cross Association, Inc., Chicago, Ill.:

Analyses such as The Study of Hospital and Medical Economics, to which Mr. Anderson referred, will exert significant influence on the issues and programs with which they deal. And the issues and problems are proving deeper and more varied than even the initiated might suppose.

Here are some of the things that we have learned we must keep in mind as we proceed with our research and solutions:

1. No key issue in the field of hospital and medical economics can be viewed from an administration point of view, in a microcosm. All elements of medical care are interrelated. To discuss hospital programming, for example, without an understanding of medical practice, is to dwell on form without substance—although I would be the first to admit that there is plenty of precedence for this.

2. We are at a stage where preoccupation with specific issues only is apt to result in chronic depletion in other areas. For example, preoccupation with the aged has led many to lose sight of the fact that other groups, such as the unemployed, are in a similar plight.

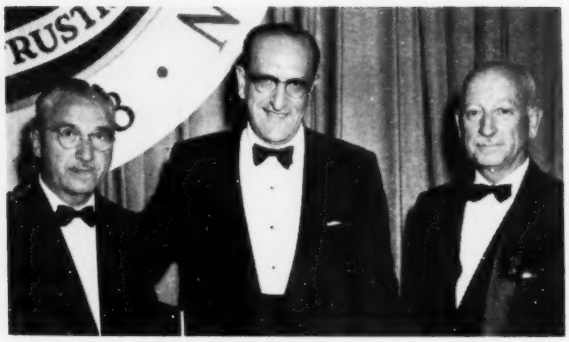
3. Intelligent goals and objectives governing policy decisions should stem from an understanding of the whole health environment. Otherwise, decisions may only accidently or inadvertently have survival value.

Government expenditures for personal health care in Michigan approximate 17 percent of the total spent in 1958, leaving approximately 80 percent of our expenditures in the voluntary sector. What is this area like?

Unlike government efforts, it is characterized by less precise charters, fewer regulations, and a less well-developed sense of boundaries. It is essentially local, and voluntary, in character.

Critics of the voluntary system say that the normal limitations of free interaction, the lack of perfect knowledge on the part of the consumer (patient) in making a choice, and the lag involved in supply and demand adjusting to changing conditions are overbearing when

Hospital-Physician Relationships reviewed the problems in this area, with suggestions for solution. Louis B. Blair, center, superintendent, St. Luke's Methodist Hospital, Cedar Rapids, Ia., was chairman. Speakers were Peter B. Terenzio, left, executive vice-president, Roosevelt Hospital, New York City, and Donald J. Caseley, M.D., medical director, Research and Educational Hospital, Chicago, Ill.



Top left: Senator Lister Hill of Alabama, and Harold H. Burton, associate justice, U. S. Supreme Court, received Awards of Merit from the American Association for Hospital Planning for their "distinguished contributions to hospitals and to the health of the American people." Donald J. Cronin, executive assistant to Sen. Hill accepted the award in the Senator's absence. Sen. Hill and Justice Burton were legislative sponsors of the Hospital and Facilities Construction Act of 1946.

Left: Two major awards were bestowed at the annual banquet of the AHA. E. M. Bluestone, M.D. (l.) former director of the Montefiore Hospital in New York City received the Distinguished Service Award. The Justin Ford Kimball award was presented to James E. Stuart (r.) chairman, board of governors, Blue Cross Association, Inc., Chicago. Dr. Jack Masur, AHA president, presented the honors.

Below: Many hospital association notables were present at the meetings and at the banquet, including Leo Lyons, executive director, American Protestant Hospital Association, and Mrs. Lyons.

considering the health of the population.

Advocates of the system maintain that these are relatively small prices to pay for the incentives for superior effort, the attractiveness of the elbow room involved in recruiting professional personnel and the inventiveness which arises from more spontaneous effort. Yes, some hospitals will be built that shouldn't be, but gradually a mechanism will be found to deal with the situation, such as a local hospital council with a master plan—and when the problem is resolved, it will have all the key parties voluntarily and thus more enthusiastically behind it.

The problems facing the voluntary system are tactical and strategic, but the main problem must be seen as lack of leadership. Too many of us lack a philosophy of medical care; fail to see the interrelation of the many parts involved; are prone to deny that problems exist; have become too rigid; and seem to lack courage at certain points.

The voluntary system is not magical; it exists today because it has done an effective job. We must get busy closing our gaps and strengthening our weaknesses. Let us accept the Administration's proposals on the aged as a challenge to be met. Let us face up to voluntary coordination and centralization where needed, controls over utilization quality at several key points, and organization in areas where too much now is left to chance.

House Staffs Often Suffer from Lack of Orientation to Hospital

Donald J. Caseley, M.D., medical director, Research and Educational Hospitals; associate dean, College of Medicine, University of Illinois, Chicago:

It is an accepted fact that imperfections exist between 1) generalists and specialists; 2) medical staff and hospital; and 3) specialists and hospital.

Let us consider them in the order mentioned. The specialists function in a restricted area of knowledge as against the generalists, and the hospital is the field where the struggle occurs. When management finds itself in battle with the medical staff, it usually indicates a lack of understanding of highly individualistic specialists. The result can be a complete vacuum between the two, with the doctor thinking of the hospital as a competitor.

If time and effort is taken to initiate the medical staff into the hospital complex, the story is different. Medical students are readied for their new environment with a tour of departments and a discussion of their objectives. Ethics of student life are discussed. Some kind of program is also usually carried out for new internes and residents. How many house staffs get the same attention? They suffer, usually, from our sins of omission.

In the last area, that of hospital specialists, we often unfortunately see a loss of distinction between ethics and dollars. The specialist too often bargains from the feeling that he is an independent organization within an organization, and in variance with the overall organization.

In 1959, the IHA and the Illinois Medical Society, in an attempt to get at the problems underlying the friction between the hospital and the physician, sponsored a joint conference, with speakers and group leaders evenly divided. The meeting demonstrated the

capacity of the two areas to work together in a broad field of agreement. The consensus was that the meeting was quite beneficial, not so much for the new ideas produced, but for the goodwill engendered.

This year the meeting included board of trustee representatives. Next spring, the meeting will be devoted to physician-nurse relationships. In 1963, the theme will be the orientation of new staff members to the hospital and its policy.

M.D.'s Must Recognize Differences in Hospital and Outside Practice

Peter B. Terenzio, executive vice-president, Roosevelt Hospital, New York, N. Y.:

What is the proper practice of medicine? We conduct *business* as an individual, partnership, corporation or trust. The limit of liability of a corporation is such that in case of suit, only the finances of the corporation (not the individuals therein) can be touched. Professions, however, are so personal that the government maintains there shall be no corporate practice. A doctor may work for a bank or other corporation, but he is not working *as* a corporation.

Physicians who have hospital practices must recognize that there are differences which do not exist in outside practice: 1) the clientele is captive, not competitive; 2) there is no freedom to expand service or space; 3) no freedom in the way he handles personnel; 4) no freedom in the matter of fees. In the last matter, each hospital is on its own. Some maintain a salary arrangement; in others, the doctors fix fees which they split with the hospital—a complicated arrangement.

As we moved off the doctrine of immunity, we recognize that trustees have delegated care to the doctor but have not shed money responsibilities. The doctors are still employees of the hospital, and in many cases the latter is responsible for negligence.

There is urgent need for a reexamination of the organization we have; putting a box marked "doctors" to one side of our organization chart isn't right. The way in which physicians must assume responsibility must be clarified.

The New Employee

Orientation Essential; Fosters Security, May Lessen Turnover

Max Elder, director, public relations, personnel and educational services, Miami Valley Hospital, Dayton, O.:

I cannot recommend a perfect method to orient the new employee to your personnel program. There is no absolutely best method, of course. However, personnel program orientation is essential, and there are some methods which are better than others.

All of us like to know where we stand, what we can and cannot do in our jobs, what to expect from our jobs. We all need a feeling of relative security, and this security can come best with the firm knowledge that we are governed in our work lives by a set of sound personnel policies and procedures which are printed and are available to all concerned.

On the assumption that we have personnel policies, how do we go about orienting and acquainting the new employee with these policies, and how do we continue to keep him currently informed during his employment with us? In order to answer some of the questions, I sent a questionnaire to 50 hospitals across the country. Forty-three responded, and of that number, all but four had a formal, organized general orientation program for new employees, or are planning one. Time for orientation ranged from one to eight hours, with 25 hospitals giving between two and four hours to the program.

There was much disagreement over when orientation should be given—before the employee goes on the job, the first day on the job, or some designated time following his association with the hospital. My own preference is for orienting the employee after he is in his job. By that time he has had a chance to meet his fellow workers and learn something about his job. He is more receptive and at ease.

The orientation program must be "sold" to some department heads who are unwilling to give up the new employee for even an hour for something so foolish as orientation. Many times the employee is desperately needed to fill a gap. It is up to the personnel department to convince the department head or supervisor that this employee will be a more satisfied, secure, and balanced employee, and may remain in the position longer if he is well oriented.

One of the best ways to orient the new employee to the personnel program is to distribute the published policies at the orientation session or when the employee is processed. Using the printed piece as a base, the orientation can be strengthened by picking out key aspects of the program and discussing them in detail. Visual aids can be used to supplement the discussion. A question and answer period should be provided, and if the questions don't come, the new employees should be queried as to their understanding of the policies.

In our hospital, the employee's handbook contains an agreement which he must sign and submit to his department head indicating that he has read the book and agrees to comply with the regulations stated. The agreement is filed in the employee's record folder. This does not assure that he has read the handbook, but can serve as a useful tool if he later comes back

Harold Hillenbrand, D.D.S., (r.) secretary, American Dental Association receives congratulations upon being named an honorary member of AHA, from Edwin L. Crosby, M.D., executive vice president, and Maurice J. Norby, secretary, AHA, Chicago.

Above: Birds-eye view from the balcony of the ballroom in Convention Hall in Atlantic City of the 27th annual Convocation Ceremony of the American Hospital Association. The newly inducted Fellows in the professional society are shown receiving their certificates from President Sutley.

At left: President Melvin L. Sutley is shown with the three distinguished persons who were granted Honorary Fellowships in the American College of Hospital Administrators. They are, left to right, President Sutley, Mrs. Lillian M. Gilbreth, author and educator, New York City; Robinson E. Adkins, executive officer, Department of Medicine and Surgery, Veterans Administration, Washington, D. C. and Brig. Gen. Oliver K. Niess, surgeon general, United States Air Force, Washington, D. C.

saying he was not familiar with a particular rule.

Personnel policies require interpretation. Generally speaking that interpretation should come at the department level. If we expect department heads and supervisors to interpret policy, we must provide them with adequate interpretation. Two hospitals in the survey provide a supervisor's manual in addition to a published handbook for employees.

Introduction to Specific Job, Immediate Surroundings Aids New Employee

Richard H. Malone, administrator, Jefferson Davis Memorial Hospital, Natchez, Miss:

To most of us, our first day on the job was a shattering, demoralizing experience. We were unsure, insecure, frustrated and downright frightened.

The department head to whom a new employee is assigned must recognize that any new worker is at a decided disadvantage in his first few days. An alert supervisor will see to it that the new person is treated with kindness and personal consideration.

The new employee needs to know where he will do his work, and who the persons are with whom he will work. He also must be familiar with the hospital's general organization. A department organizational chart helps him see his job in relation to others in the department. His position as a vital link in the chain of better patient care should be stressed.

It is important that he know how grievances are handled, and that they are handled; that he realize that he'll be treated fairly and that his supervisor is ready to listen to his complaints.

When the newcomer is an addition to the administrative staff, three major areas should be stressed in his orientation: hospital background and philosophy, ad-

ministrative detail, and information concerning professional practices. If he is a recent graduate, he might be assigned selected readings on administrative topics. An informal approach to orientation would depend upon his recent background. As the hospital increases in size, a more formal indoctrination will be required.

New medical-staff members need to be introduced to the hospital's standards. The credentials committee will make sure that the new physician is qualified in the medical field. It is up to the administrator of the personnel program to encourage him in proper physician-hospital relations.

In orienting persons connected with the hospital, one group is often left out—the board of trustees. Most often, these men are business or professional men who have no knowledge of running a hospital. The administrator is the person most fully prepared to orient them. Board members should be brought up to date on modern medical miracles, bases of remuneration to the hospital, the essentials of good patient care, and particularly community relations.

An extra meeting or series of meetings are excellent for orientation. Lectures may be given by the administrator and by department heads. A loose-leaf binder can be supplied to each member of the board, in which he may place lecture outlines, which he receives beforehand. There is a distinct advantage to having outlines available before the lecture is given, particularly when the lecture may involve unfamiliar terminology, as when the chief of surgery talks about the handling of major surgical procedures. To further medical staff-trustee relations, an annual joint meeting should be held.

AHA President Presents Thirteen Goals for Hospitals

Jack Masur, M.D., president, American Hospital Association; director, Clinical Center, National Institute of Health, Bethesda, Md.:

A wise observer of the contemporary scene has remarked that we live in an era when society and medicine are interacting with a vengeance. We are in an age of unparalleled scientific progress, with occasional technological spectaculars. Our people want the benefits of medical research. The big question before us is how to achieve a suitable balance between the quantity and quality of medical care within the available resources of personnel, facilities, organization and money.

I have a little book of "ideas to brood about." From it, I have chosen a series of goals for hospitals. They are:

1. *To achieve improved public understanding of the higher cost of better hospital care.*

Hospital costs have gone up 111 percent during the past 10 years; the quality of care has gone up to a much greater degree. We have an obligation to establish a more accurate image of our hospitals in the minds of persons who do not accept the fact that this higher quality has brought a justifiably higher cost.

2. *To attain through regionalization a more effective approach to the responsibilities of planning and operation of all hospitals by voluntary and governmental agencies.*

Last week, the California law on regional planning went into effect. This step together with the previous legislative action in New York, are hopeful signs, but we have a long way to go in this area.

3. *To integrate the concept and practice of rehabilitation as a component of adequate care.*

The technics of physical medicine, psychiatry and social vocational guidance are as important as the scalpel and digitalis.

4. *To develop a dynamic program for the health care of the aged.*

The promotion of a satisfactory health program for 16 million old people is now an issue of conscience. As part of our deliberations in this House of Delegates, we shall have a presentation of the current status of the Kerr-Mills program to enable us to judge where greater efforts must be made in order to extend this Federal-State program in the immediate future.

5. *To extend existing accreditation programs and to activate new types of approval programs.*

6. *To encourage the integration of psychiatric services in general hospitals.*

7. *To increase the availability of benefits and services for ambulatory patients.*

8. *To foster the development of group practice, in relationship to hospital care.*

9. *To implement more fully the concept of home care for long-term patients.*

10. *To accelerate research in hospital planning, design and management.*

11. *To support the expansion of programs of continuation education, particularly for practicing physicians.*

12. *To improve the preparedness of hospitals for mass casualties.*

13. *To participate more fully in international efforts for the betterment of hospital activities in other countries.*

In thinking over these goals, I recall that the word "patient" comes from "pati," which means to suffer or endure. The very best definition of a hospital is embraced in the old Quaker expression "bettering house."

Michigan Survey Takes Measure Of Effective Hospital Use

Thomas B. Fitzpatrick, research associate, University of Michigan Bureau of Hospital Administration, School of Business Administration, Ann Arbor:

The idea that hospitals will be used wastefully simply because the money to pay for care is available from a prepaid source is an intriguing one. For the number of opinions on this matter, there is a distinct scarcity of facts.

There is a great deal of information available on how hospitals have been used in terms of average length of stay, number of admissions per year, size of hospital bill, and number of laboratory tests performed. However, information on how the public uses hospitals is not too helpful without a knowledge if what kind of people are using them in terms of age, sex, diagnosis and other descriptive characteristics.

The measurement of total use may reveal the possibility of ineffective use simply by showing a wide range of use. To carry the inquiry a step further, it is necessary to find improper use—overuse and underuse—and measure it.

(Continued on next page)

A rest for the Londons and a refreshing shot for the photographer. Mrs. Jordan London, purchasing agent of Trafalgar Hospital, New York City, sits for a few minutes with sons Michael and Daniel

In our study on the character and effectiveness of hospital use (one aspect of the total look at hospitals taken in the University of Michigan Study of Hospital and Medical Economics), almost 11,000 1958 discharges were examined from a probability sample of 47 general and 23 specialty hospitals in Michigan. For some purposes, the discharges from the general hospitals alone were used.

For more intensive study within the general hospital, the group of discharges was narrowed still further to encompass patients with one of 18 selected diagnoses. Complete clinical details were obtained on these cases, and they were evaluated in terms of the effectiveness with which the hospital was used.

To obtain more information, both medical and extramedical, regarding effectiveness of hospital use, to test the adequacy of the medical record in supplying such information, and to survey physician opinion of some aspects of effective use, a final selection of 1,751 discharges was made from the intensively studied group. In these cases the attending physician was interviewed.

A further, more intensive study involved 5,750 discharges from general hospitals in which the primary diagnosis of the patient discharged was one of the 18 selected diagnoses. Criteria for effectiveness of hospital use for each diagnosis were drawn up by panels of specialists. Clinical abstracts were made from the medical records, and these abstracts were evaluated by physicians according to the established criteria.

For all cases that did not meet the criteria, and for a sample of those that did, interviews were held with the attending physician. With the help of the interview material and information on social and economic factors which might have influenced the admission or length of stay, a final evaluation of effectiveness was made.

A few of the test findings show that the average length of stay increases with the age of the patient, as do consumption of hospital services, the hospital bill, and ancillary charges. The 65-and-over group have more repeat admissions to the hospital than the under-65.

In the 18 diagnoses studied, 6.8 percent of the cases involved understay, 9.6 involved overstay. The number of days of understay involved was 2.3 percent of total days of care; days of overstay amounted to 6.8 percent of the total days. Variation in overstay by diagnosis ranged from 3.3 percent of tonsillectomy cases to 32.3 percent of urinary-tract infection cases.

Five of the diagnoses, which constituted 47.5 percent of the total discharges within the 18 diagnoses, were 100 percent necessary (such as delivery). Eliminating these five, the remaining 13 diagnoses contained 4.3 percent unnecessary admissions.

When the patient paid his entire bill out-of-pocket, understay occurred in 16.7 percent of the cases, overstay in 6.3 percent. When the bill was paid by any other source or combination of sources, including the patient, overstay amounted to 11.8 percent, understay 5.6 percent.

Blue Cross Utilization Programs

Close Look at Utilization Results in Cost Consciousness

Carl M. Metzger, president, Hospital Service Corp. of Western New York, Buffalo:

We are acutely aware of a series of problems common to all hospital consciences: costs are going up, Blue Cross rates are going up, admission rates are rising, the public is howling, and hospitals, the medical profession, and Blue Cross are being grandstand-managed from every side. It is a curious paradox that the detailed surveys and investigations which have been undertaken in the last few years by those most competent to make unbiased judgments in this field do not support the idea that things are in such an awful mess.

This does not mean that nothing is wrong, or that considerable improvement cannot be made, but the surveys balance the deficiencies with commendation for much that is good, a factor missing in the sometimes irresponsible criticisms leveled at us.

In coming to grips with the problem of utilization, we eventually concluded that the problem had four interrelated parts, and that matters to be considered in arriving at answers for each were radically different. We posed these questions to ourselves:

1. What can be done about utilization?
2. Should anything be done about utilization?
3. Who should do something about utilization?
4. How can Blue Cross do something about utilization?

We have strong convictions about some of these parts and theories about others, and we're still groping for answers on the remainder. We think something can be done.

We believe that appropriate hospital utilization will

providers of the service the cost impact of what may possibly be unnecessary utilization. Researchers have pointed out that it is not the long-stay case that warrants particular attention, but the possibility of over- or understay on those of short duration.

One of our large metropolitan hospitals claimed that, as a teaching hospital, it cared for more complicated cases and therefore the average length of stay would be longer. We didn't know whether this was true or not, but it led to further investigation. A probe of statistics showed that the difference in length of stay could be accounted for in the "mix" of cases, and in the fact that the hospital had no pediatrics section and only a small obstetrics department. With the absence of these two short-stay departments to dilute the average of all cases, the hospital would have a longer average length of stay, even if other factors were the same.

We have been able to develop and interpret our information into a form which is understood even by those not trained in statistical analysis. This is helpful to the hospital, but the most important single thing that came out of this situation was a demonstration to the hospital administrator and to ourselves that pet theories and common contentions may often be wrong.

Over the past four years we have expanded the statistical tabulations and developed a quarterly report of utilization. The trouble with most reports, we found, was that the busy administrator glances at them and tosses them on a shelf unread. To eliminate this handicap, our director of hospital relations arranges an interview, during which he presents the report in person, reviews its contents in detail, and attempts to point out fluctuations and trends.

Meetings with the medical staff and with officials of the medical society also have proved fruitful, and from them have come a number of worthwhile ideas. One came out of a study of length of stay of obstetrical cases. In 1960, the over-all average stay for obstetrical deliveries collectively in all of our hospitals was 5.7 days. We found, however, that the normal stay for such cases in the various hospitals ranged from 4.4 days to 6.1. We obtained an invitation to present our utilization story on obstetrical cases to the local OB society. We offered no criticism; we merely asked, "Why?"

While there were some differences of opinion, the consensus was that five days should be sufficient, if there were no complications.

It was then proposed that we remove the 10-day limitation on service and increase this to 120 days, the same as for other types of cases, but that on all OB admissions we provide an automatic approval for only five days. If there were complications which justified a longer stay we should extend the authorization on request and with substantiation of the facts from the attending obstetrician.

Our over-all program has attracted considerable interest. Quite a few persons have visited us to learn more about it. We have been concerned about the reaction of many who somehow get the notion that we are attempting to tell the medical profession how to practice medicine and hospital administrators how to run a hospital. On the contrary—we are neither a dictatorial nor a policing organization. This is not a punitive program, and we make it clear to the providers of service that we do not consider ourselves competent either to establish or criticize the standards of performance which they apply.

Janetta and Linda loved the giraffe. . . .

Matt consented to have his picture taken *beside* the giraffe. . . . .

But Patti thought he was just too high off the floor. . . . .

Janetta and Linda are daughters of Mr. and Mrs. J. D. Reeves who share the giraffe with them. Mr. Reeves is with the property management office. U.S.P.H.S. Hospital, Ft. Worth, Texas. Matt is Matthew McNulty, Jr., son of the administrator of University Hospital and Hillman Clinics, Birmingham, Ala. Patti Horan is the daughter of Robert Horan, with Hard Mfg. Co. The giraffe? He belongs to the Hospital Furniture Co. exhibit, and is, as far as we know, unnamed.

General Hospital Study Uses Local, Outside Physician Observers

Francis E. Browning, M.D., professor of medicine, School of Medicine and Dentistry, University of Rochester, Rochester, N.Y.:

(Continued on next page)

Numerous studies have been done to assess patterns of hospital utilization, yet few have included a consideration of the kind and quality of other health facilities available as alternatives to hospitalization.

We conducted a survey of 1,008 hospital beds in the seven general hospitals of Rochester and Monroe County. This study had several unique features; it was a survey of hospital beds randomly selected by physician observers, the observer evaluated each bed occupant in terms of his medical-care needs on that day, and it was conducted by 28 physicians, half of them from Monroe County, the other half from communities outside Monroe County.

The total population of bed days to be surveyed was defined by asking each of the seven hospitals to furnish a floor plan or bed list which would identify each medical, surgical, and medical-surgical bed. The survey was done in two parts. In one part the observers were local physicians chosen by the hospitals. Each hospital was asked to name an internist and a surgeon as an observer team. In the other part of the survey, observations were made by physicians from outside Monroe County. As before, there were seven teams, each consisting of an internist and a surgeon.

Schedules were arranged so that each team visited each hospital, and all hospitals were visited each day by a different team.

When a bed was selected for survey, the internist or the surgeon reviewed the case, depending on the nature of the problem. In many instances a review of the patient's hospital record was sufficient; sometimes it was necessary for the physician observer to visit the patient for supplemental information.

Data was entered on a questionnaire form. One question asked whether the observer thought the bed occupant required hospitalization on that day considering the existing health-care facilities. If the answer was no, the observer indicated which of the other health-care facilities was needed. If the answer was yes, the observer indicated whether the kind of hospital care needed was the intensive type, the intermediate type, or self-care.

Study results showed that local physicians judged that 14.3 percent of the bed occupants surveyed could have been cared for in other existing facilities. Visiting physicians judged that 18.8 percent of the patients they surveyed were in this category. Assuming the existence of optimal health-care facilities, the figures were 19.6 percent and 23.8 percent for the local and visiting teams respectively. In every instance the proportion of medical beds occupied "unnecessarily" was higher than that for surgical beds.

The question of whether an individual patient may require hospitalization is almost entirely a matter of individual medical judgment. Judgments with respect to this question may vary considerably from one physician to another. We are well aware that there are sometimes valid nonmedical reasons for keeping patients in the hospital. We asked our observers to base their judgments on medical-care needs only.

Our results may have little applicability in other geographic areas, but we believe the survey demonstrates that cooperative effort in well-designed studies can aid planning for a balance in community health-care facilities.

Nursing's Changing Role

Nursing Philosophy Must be Re-defined to New Care Concepts

E. D. Pellegrino, M.D., professor and chairman, department of medicine, University of Kentucky College of Medicine, Lexington:

The function of nursing has existed since the first human became ill and disabled. It arose out of the interested ministry of family and friends who provided certain services still identified as nursing—help in care of bodily needs, sympathetic companionship, observation of the patient, and the carrying out of a therapeutic plan, however intricately or primitively conceived.

It is this image of the satisfaction of the intimate needs of the sick which comes into all our minds under the term bedside nursing. This is, and always will be, a valid definition of the function of nursing, but it can no longer be the full content of the profession of nursing.

A major modification of the age-old view of nursing came a century ago when women were specifically trained on a professional basis to perform services needed by the sick. The initial idea was to provide the traditional services, but with better-trained persons. However, rapid changes in medical practice, the use of hospitals, and the patterns of social organization imposed a set of administrative activities which left little time for caring for individual patients. Aides, practical nurses, and volunteers assumed more responsibility at the bedside, yet the nurse became busier with desk work. The present dilemma seems to arise from the nurse's attempt to recapture control of the functions of nursing. But has the substance of professional nursing now changed in such a way that to reverse the last 100 years of history is no longer possible or desirable?

The admission of the need of a nursing team transfers the nurse's attention from the manipulation of papers and technics to the manipulation of people. The team must be led; only the professional nurse can lead it. Insisting that certain activities like charting medications and treatments can be done only by the professional nurse gives rise to the misconception that these activities are the very substance of professional nursing—a serious error.

It is the professional nurse who interprets the role of nursing in each case and molds it to suit her patient's specific needs. Clinical nursing, then, is not something done to or for the patient but the perception of what needs to be done and how. Equally important is seeing that it is done efficiently. There are times when nursing functions can be done by others and times when only the professional nurse can do them. But only the professional nurse can make this decision, since it must be based on a knowledge of the clinical state of the patient.

Unrealistic Economic Situation Turns Many from Nursing Profession

Judith G. Whitaker, R.N., executive secretary, American Nurses' Association, Inc., New York City:

There is a need for the recognition of professional practice as an essential in the hospital's structure. The long-held concept of general-duty nursing as the "beginning" position in nursing practice must be replaced by the

The president's reception drew a crowd purely social in intent. They came to meet the new president, Dr. Jack Masur, and to renew old friendships. In the circle, the Rt. Rev. Msgr. Clement Schindler, president of the Catholic Hospital Association, trades views with Carteret A. Alsop, Jr., assistant administrator, St. Vincent's Hospital, St. Louis, Mo. In the center picture, J. Earl Morse, trustee, Brewster Methodist Hospital, Jacksonville, Fla., is surrounded by (l. to r.) Mrs. Morse, medical records librarian at the Brewster Hospital; Mrs. Francis Hawkins, president, women's auxiliary, Provident Hospital, Chicago; and Jacqueline Hendry, R.N., Brewster. At right above, (l. to r.) Jose Angel Gutierrez, M.D., instructor in hospital administration, University of Mexico; German Lelode Larrea, M.D., and Laura F. Vivaldo, M.D., of the Asociacion Mexico de Hospitales, Mexico City.

concept of the clinical practice of nursing as a continuing career. Economic incentives must be provided for the nurse to continue her professional education as a clinician and improve her knowledge and skills as an expert in the planning, designing, and giving of nursing care. The present narrow span between the minimum and maximum salaries paid by hospitals gives no recognition to the length of experience or to additional education for those engaged in direct care of patients, and is an important factor in the mobility of nurses in this area of practice.

At present the only way a nurse may progress economically in the hospital setting is by becoming a head nurse, then a supervisor, and perhaps going on to assistant director and director of nursing service. The charge is often made that nurses are too interested in status and economic security. Actually, the low economic position of the nursing profession has had a telling effect on recruitment, on retention of nurses in hospital nursing, in attracting inactive nurses to return to practice, and on morale which affects both quantity and quality of patient care.

Traditionally, nursing has been a woman's profession. Recently, however, other occupations on the professional level have been opened to women. The fact that women are pursuing the necessary education for these other careers is documented by college enrollment figures. The number of women attending college in 1959 was 69 percent greater than in 1950. Yet enrollment in schools of nursing for professional nurses in 1959 was barely 20 percent above the 1950 figure.

If we expect nurses to remain in nursing and if able young persons are to be recruited, consideration must be given to enhancing the economic and social status of nursing and to making it a competitively desirable career.

The hospital wage survey conducted by the Bureau of Labor Statistics reports that 1960 salaries for general-duty nurses ranged from $65 a week in Atlanta to $89 in the Los Angeles area. The median city average was $79.50 a week. A comparison of nurses' salaries with earnings of either office employees or of factory maintenance crews in the 15 cities covered by the survey shows a difference of $25 to $30 per week higher for these women. Accounting clerks and secretaries with skills usually acquired in high school or on the job average $4 to $8 a week more than the general-duty nurse.

The specific exemption in the Labor-Management Relations Act of 1947 relieves nonprofit hospitals from the obligation to confer and reach agreement with employees as to the terms and conditions of their employment. In the face of this exemption nurses have sought a voice in making the decisions affecting their welfare. Denied the legal protection granted other employees in our society, they have often met with intimidation, coercion, and summary dismissal.

Efforts to improve the educational base of nursing and to provide the kind of nursing the nation expects and needs will mature only if paralleled efforts are made to improve the economic base of the profession. A first step in this direction is the enactment of federal legislation which will provide the same rights and privileges to nurses, wherever employed, that are accorded to most other wage-earners in our society.

Immediate Rehabilitation Measures Protect Hemiplegic Patient's Abilities

By Edward E. Gordon, M.D.*

Medicine and research have been making dramatic contributions to the prevention of disease, to the curing of erstwhile "incurable" diseases, and to the general well-being of our people.

But within the spectacular and exciting growth of accomplishment lie the seeds of an unfulfilled promise. Allowed to flourish, they will lay a withering touch on the bloom of achievement.

Our increased life span is a medical accomplishment of the first magnitude. Our failure to help make the added years *worth* living is the unfulfilled promise, and the reapers of our unconcern are those in the so-called "golden" years. The elderly among us have lived too long to delude themselves that the remainder of life will be a succession of sun-drenched days, but they wistfully await a little light to see their way with dignity, a measure of confidence, and a reason for being.

I am concerned primarily with what we do, and what we fail to do, to help the hemiplegic patient attain the best potential possible with what he has to work with physically, mentally, and emotionally. Many of these patients have been reclaimed; they may not have gone back to the job, but they have not become a burden or liability to themselves, their family and friends, or their community. Thousands more could be reclaimed, and herein is a moral as well as a medical concept. It is not morally right to deprive these people of rehabilitation.

Who must assume responsibility for salvages? Why are so many functions that could be returned to full or partial capabilities allowed to deteriorate? It is the responsibility of the doctor, the nurse, and the hospital as the center of education and action in the community. The hospital must recognize sequelae in disability as its problem.

Now, *why* the unfulfilled promise? Some of the reasons are not exclusive to hospitals; the lag between current needs and outmoded methods exists in all

Dr. Gordon, author of this article, recently gave the first in a series of lecture-demonstrations on the care of the hemiplegic patient in the general hospital. He is shown at St. Elizabeth Hospital in Belleville, Ill., where he addressed some 100 nurses, students and paramedical personnel. The programs are being sponsored by the Chicago Medical Society.

Proper positioning of the patient is shown by an interne. Of utmost importance is the use of a footboard, with the mattress pulled up to permit free space under the heels. The weight of the limb is small, but approximately six-tenths of a pound per square inch is exerted in the prone position, and even this much can result in necrosis.

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Photos on this and following pages show Lucille Schaeffer, R.N., of Michael Reese, demonstrating the care of a hemiplegia patient in her third week of hospitalization. At left, support for the affected limb is given by a rolled towel, with the end tucked under patient to retain position.

In the center, proper turning and repositioning is mandatory, whether patient is conscious or unconscious. Support must be basic and continuing. Right, the affected arm, with hand immobile, is elevated on a pillow to favor venous return. A bandage roll is placed in hand to discourage contracture.

levels of our culture. In addition to this natural hiatus, there is a psychological one in that we in this country are youth oriented. The care of polio with rehabilitative technics was begun over 60 years ago, yet none of the procedures was translated to fit the needs of the aged. We feel that youth has a future, and we are dedicated to making that future as bright and rewarding as possible. Whether we like to admit it or not, we feel that the aged have no future, so out of apathy, disinterest or defeatism, we let the aged exist.

We are hampered by lack of knowledge, erroneous information, obsolete attitudes, and maleducation. We must educate. We must get the concepts of medical management of hemiplegia victims into medical and nursing schools. We must reeducate nurses, convince top level nursing that our obejctives are as attainable as they are desirable.

We must change our attitudes about the patient with hemiplegia, and since words determine ideas and actions, the best place to start our change is with words themselves. Consider the word "stroke." It is a condition associated with the impairment of circulation of a portion of the brain due to a leak or plug, which usually results in a one-sided motor disability, or hemiplegia. There are one-and-a-half to two million persons suffering from these residual effects, which handicap them to a greater or lesser degree.

But consider the word again in its general connotation, even among many medical persons. It implies a sudden bolt out of the blue; that those so stricken have no real chance of recovery. Even if paralysis comes about slowly, we still use the word stroke, which is meaningless in such cases. In our relationships with these people we have been guilty of corrupting the philosophy of being our brother's keeper in that we have been literally just that. We have kept him merely in bed, board, and shelter, usually in a hospital at a rather expensive rate, and have given him nothing else.

If we will think, instead, of a person with an illness, we shift the emphasis to helping that person. The practice of referring to a patient as a cardiac, a diabetic, a hip fracture, is an erroneous way of regarding people, and impels us to disregard the rest of him—which also happens to be the major part.

There are certain cliches in hospital jargon which we use carelessly. They may be called cliches, but my own disagreement with them, and aversion to them, is so deep that I refer to them as the Seven Deadly Sins in hospital practice. Here they are:

1. **Stroke is an injury to the brain with irreversible loss of function.**
   This statement is an oversimplification. There is too little known today about brain function to justify this dogmatism. We *do* know there is an enormous reserve capacity.
   Substitute: *Reserve capacity will reverse incapacity.*
2. **You can't teach an old dog new tricks.**
   I especially deny this insulting inference. We cannot take the chronological age as a criteria: the person of 90 may have the physical capacity of a person of 60; the person of 30 may have the heart of a man of 65.
   Besides, what is it we want to teach him—how to run a mile, how to speak a new language? This attitude is the easy, one-sided view of things, abrogating the necessity for proper evaluation—which means the evaluation of mental as well as physical possibilities. Hopelessness may simulate senility; so may overlarge doses of sedative (the elderly need less), anxiety and panic. Anyone working with sick people knows that, in any age category, regression is often an escape from reality.
   Substitute: *Try to teach the old dog old tricks, and leave the new tricks to him.*
3. **Memory defects indicate severe mental deterioration.**
   Dulling of recent experiences is actually a turning away from the painfulness of the present, and a return to the pleasant experiences of the past. This occurs even in old folks who seem to have very little to look back upon, from our point of view.
   Substitute: *Only great moments remain in memory, so make the present memorable.*
4. **Incontinence is a sign of irremedial organic deterioration.**
   Incontinence is often infantile behavior designed to control the environment. The basic causes may be

Participation by the nurse in bed exercises is challenging to the person determined to help herself. This patient, who is ambulatory, responds well to the leg-raising goal of the nurse's hand. A patient is ready for ambulation when she can lift the heel one inch off the bed with the knee held stiff. In the center, the patient exercises by clasping her hands and stretching both arms upward. On the right, Miss Schaeffer stretches the affected leg by grasping it firmly by the heel, and with her other hand positioned below the knee, pulling steadily away from the patient's body.

psychological rather than physical. Inactivity and tensions often play a part, and incontinence often disappears as the rehabilitation process takes over.
Substitute: *Beware incontinence in your patient—it may reflect incompetence in your staff.*

5. **An impeccably smooth bed is the quintessence of good nursing care.**
This attitude, which I call the Florence Nightingale complex, can be devastating. A faultlessly smooth bed appeals to the eye; it can be catasthropic to the foot. A partially paralyzed foot held down tightly by the sheet will suffer a shortening of the calf muscle. Trapped by the sheet, the foot is set into the ballet dancer's position which is completely incompatible with walking.
Substitute: *Better a crumpled bed than crippled feet.*
(The use of a bed span will correct this violence to the foot and also satisfy the esthetic sense.)
6. **It takes two strong men to get a hemiplegia up.**
This statement is a complete fallacy; it's a simple matter of knowing how.
Substitute: *It takes two strong men with no imagination, or it takes the patient and one average man with imagination.*
7. **Verily the nurse is the handmaiden to the stricken, for she waiteth upon him hand and foot.**
This may be a touching description, but in action it destroys confidence, initiative and self-help.
Substitute: *Help the patient help himself.*

If some of my discussion has seemed negative thus far, there is a wakening of positive attitudes, technics and results beginning to be felt. In the 1950's, we had hemiplegic patients who had been lying in bed for several years, with nothing being done for them except certain necessities aimed at keeping them alive.

We are moving into a new era, in which we are getting away from the concept of fatalism. In the last 10 years we have shown that hemiplegic patients can achieve a degree of motor capabilities, can be free of the bed (which can be a very dangerous place), and can get about in a somewhat normal fashion. We can say that 85 percent of such patients will walk within two months, with or without mechanical aids provided certain necessary, and really very simple, things are done—and certain harmful things are not done.

They will not walk if they are allowed to lie in continuing positions which develop deformities. The ballet dancer position mentioned, with the upper leg rotated outward, will result in a duck-footed gait. The arm left in poor position, will assume increased deformity and compromise returning function.

There are less than 7,000 physical therapists in the United States; there are more than half-a-million nurses. There are physical therapists and occupational therapists in comparatively few hospitals; there are nurses in all hospitals.

It is common sense, then, to utilize nurses to carry out the necessary procedures. I am not at all advocating that our general hospitals become rehabilitation centers. I am saying, emphatically, that rehabilitation must be an integral part of hospitalization.

Every hospital should create the position of rehabilitation nurse, and have the incumbent matriculate in one of the three- or four-week courses available in a number of our universities. When she returns she can, under the supervision of the doctor, institute practices of proper positioning, early ambulation, and self-care.

A prerequisite of proper care and rehabilitation is the evaluation of the patients. We have to know what the patient can reasonably be expected to do before we can help him to do it. This is basically the responsibility of the doctor, but every member of the team should have the picture in terms of functional capacity. We must have some insight into his basic intellect (as distinguished from language or the ability to express himself, which may have been affected by his illness); his emotional status and the state of his memory.

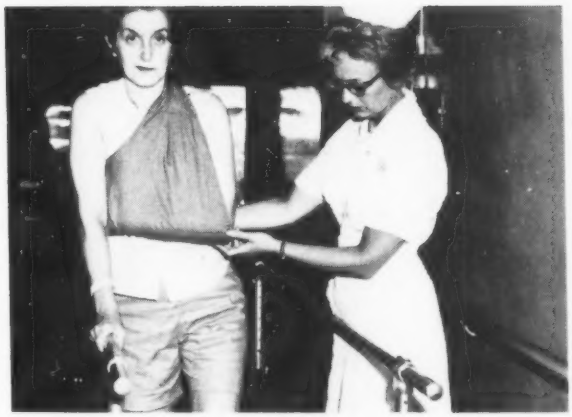
On admission, the first principle is proper body positioning, which should be routine technic on the floor to which the patient is admitted. It's everybody's business. The legs must be arranged so that the heel is relieved of the dead weight of the affected limb.

In standing, the heel of an able-bodied person bears pressure of eight-tenths of a pound per square inch, which drives the blood away from the immediate area. We shift our position frequently in order to relieve this pressure and distribute our weight, which the patient

A length of knotted hose is an excellent aid in sitting up. An over-the-head triangle is not desirable; it merely lifts the patient up without assisting the necessary forward movement.

Above, shoes are difficult—especially the loafer type worn by this patient. Preferably are those with elastic laces, which are more easily managed with a long-handled shoe horn.

A ready-made triangular sling is easily slipped on by the nurse. This was the only assistance actually needed by the patient, who dressed herself and got into the wheelchair on her own.



The sling is worn while navigating the parallel bars, with the help of the good arm. To practice walking without the handrail, a towel around the patient's waist gives assurance and stability.

cannot do, of course. The total weight of the limb is small, but approximately six-tenths of a pound per square inch is exerted in the prone position, and even this much can result in necrosis.

Early ambulation is extremely important. The patient is ready for training in walking when he can lift his heel one inch off the bed with the knee held stiff. This precept holds if there are no medical contraindications such as cardiac, renal or pulmonary disease.

A tilt table is helpful as the first step in getting the patient erect. Then he can go to the parallel bars (a row of chairs will serve if bars are not available), and he eventually will walk with the aid of a walker, a cane, a short brace, or with no aid at all.

Turning to the upper limb, handicapped persons can be made almost self-sufficient, as witness amputees, who with the help of gadgets, take care of 95 percent of their daily activities. Thirty percent of our hemiplegic patients will use the arm and hand in some way. Up to 30 percent will return to work. Of patients in nursing homes, one study showed 75 percent returned to the community.

When we give this sort of help to hemiplegic patients as routinely as we administer oxygen, perform resuscitation and replace blood, then will we begin to fulfill our promise to aging men and women. Medicine and nursing have many rewarding moments; none ranks higher than giving substance and meaning to the last miles of the journey of life.

What is Good Patient Care?

By Kenneth Knapp*

Perhaps this article should begin with the words of a judge presiding over one of the courts in our nation's capitol, who said, "The decisions of this court may not always be right, but they are never in doubt." I don't profess to provide the answer to the dilemma of patient care. I hope only to stimulate thinking where much is needed, to encourage all in the hospital field to be discontent and dissatisfied with what we are doing and to envision something better. I sincerely believe the need for care and the kind of care needed is found only within the patient.

The topic of good patient care can be viewed from two sides: (1) the mechanics involved and (2) the humanics involved in rendering patient care. Lately, emphasis has been placed upon the first of these considerations—the mechanics. Mechanics might be considered as the technical skills of nursing which, it seems, are most generally alluded to as the "professional activities of the nurse." Review the journals arriving at your hospital during any given month and you will find frequent mention of the growing demands upon the nurse to handle the so-called technical functions which necessitate the relinquishment of routine bedside duties to auxiliary nursing personnel. In fact, these routine bedside activities are generally alluded to as the "nonprofessional" functions.

The dietary aide or an auxiliary member of the nursing staff can place a food tray at the patient's bedside and the meal thus provided will undoubtedly satisfy the patient's physical requirements. But the body hunger for food is more often than not the least of several hungers gnawing at the patient. There is far more "heart-hunger" within our hospitals—the yearning for kindness, sympathy, understanding, and assurance—than there is for food. If that hunger is not satisfied, nursing has failed. Feeding the physical body is a simple initial duty, but this higher hunger—the yearning for someone to dispel loneliness, the need to clutch at an outstretched hand with its offering of sympathy and understanding, the longing for someone to lift weariness from the heart and brighten a darkened sky with sunshine—does this represent a lesser function of the nurse?

For contrast, a remarkable and worthwhile publication entitled *Tenderness and Technique* reports the results of a 3-1/2-year research project by Dr. Genevieve Meyer. The study deals with changes occurring in the roles and values of nursing and was co-sponsored by the Institute of Industrial Relations, the School of Nursing and the Graduate School of Business Administration of the University of California. Dr. Meyer relates shifts during the twentieth century from tenderness to technic, and states" . . . the value placed on tenderness receded somewhat as the image of the efficient, coolly controlled practitioner gained prestige. . . . "

Mrs. Frances R. Kreuter, a nurse-educator at Teachers College, Columbia University, compiled a four-year study a few years ago on *Evaluation of Nursing Care.* Reporting on that study she made this statement: "We think of management as nursing . . . we think of personnel management as nursing; we think of the training of aides as nursing; we think of the coordination of all these others as nursing; we think that the growing body of technical skills is nursing, but we are coming to think that care is aides' work."

Burling, Lentz, and Wilson, in describing interviews with nurses in their book *The Give and Take in Hospitals,* conclude: " . . . the concept of the nurse as an angel of mercy . . . came into disrepute among nurses during the 1920's and 30's when wages were falling and the devoted nurse saw herself and her kind exploited on every hand. It was about this time that nurses began to restructure their idea of what the profession should be. . . . They began to emphasize higher education and technical competence. The nurse as comforter, the person who provided 'tender loving care,' continued to be seen as part of the ideal picture, but certainly this aspect was less emphasized. . . . [Nurses were] somewhat shamefaced about tenderness as an element in good patient care. They weren't quite sure it was 'professional'."

R. W. Habenstein and E. A. Christ in *Professionalizer, Traditionalizer, and Utilizer,* published by the University of Missouri, describe changes in nursing thusly: "As the professional nurse arrogates—however reluctantly—tasks and prerogatives of higher-statused physicians, she finds commensurate excuse, if not need, for sloughing off tasks which to her demand the least skill or are the least 'professional.' These sloughed-off tasks, for the most part, consist of direct patient care functions."

Dr. Chope, of the San Mateo County Department of Health and Welfare, tells of a friend's recent hospital experience. During his stay as a patient he reports, "If I saw an RN it was such a fleeting glance I scarcely recognized her." He stated further that during the time he was a patient, he did not become acquainted with

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one RN, one LVN, nor one aide whom he could call by name. At the time of his discharge he said he felt he had failed to establish a relationship with any one at any time during his hospital stay.

I have no argument with evaluating the professional nurse's duties nor with relieving her of those functions that would seem to divert her from the more important responsibilities. But what *are* her more important responsibilities? My challenge is whether the duties she is relinquishing are those of lesser import. I submit that no matter however widely accepted the trend may be, the general direction taken by our concepts of what is important can conceivably destroy the very fundamental purpose of nursing and the very reason for the existence of the nursing profession—to render quality patient care.

Margaret Meade stated it most effectively by maintaining that the object of nursing is to protect the vulnerable. Are we moving toward that objective today? If not, in what general direction are we heading? Relinquishment by the nurse of functions such as admitting and orienting the patient to the floor, giving the bed bath, changing or straightening the linen, the motherly chore of rendering personal service and care, the activities that strengthen the bond between patients and those who attend them—activities occurring in the presence of and with and for the patient—the experiences shared by patient and nurse together—these are the so-called "nonprofessional" duties RN's are asked to surrender to others.

The question, of course, is whether such patient care functions *are* less important and whether they *are* less professional. I believe that it is doubtful if a more important challenge for a professional nurse can exist. Who other than the professional nurse can better turn close patient relationships into opportunities to understand, interpret, observe—and in so doing offer sorely needed supportive care? Who other than the RN is trained for such important undertakings? And what RN with all her skills can bring about such professional achievements without the opportunity for observation and rapport that only such sharing brings—for the patient's need is the nurses's greatest opportunity. But time and much togetherness is required to achieve these valuable nursing objectives. They can't be forced nor rushed to fruition by casual and infrequent contact any more than the beauty of a full-blown rose can be produced by forcibly opening the petals of the bud.

And what of the "hunger of the mind"; the need and the privilege to hear from a qualified source the things that will help bring acceptance, understanding, or interpretation; the desire for authoritative counsel, direction, inspiration. Does this involve a lesser function of the nurse?

Satisfy the hungers of the heart and of the mind and the patient's entire outlook changes. Suddenly the prognosis is brighter. The need for the numbing distraction of sedatives, codeines, or other narcotics diminishes. True lasting relief begins to replace the temporary escapes into oblivion.

And who of all the people on our nursing staff can best gird patients with the breastplate of courage and hope; who can excite them to join with her in fighting off the attack of destructive forces and inspire them to withstand the darkness of despair? Who has the power to guide the patient to wholesome, constructive, health-producing thoughts with resultant increase in strength? By these successful acts alone, resistance increases; depression lifts; worry is dispelled; and all grief, fear, pain, and every apprehension is minified. This is psychosomatic nursing: it is no less important to patient care than psychosomatic medicine is to diagnosis and treatment. Do you think the physician is about to surrender such important phases of medical practice to the paramedical people in his office? How dare we then even suggest that these psychosomatic nursing functions are the least professional duties of a nurse, best able to be relinquished to auxiliary members of the staff? Such sensitive and important endeavors belong to the most highly trained and skilled among us—and not to anyone else.

These, then, are the functions I call the "humanics" in nursing. These are the essential ingredients of "good patient care."

In a commencement address delivered before the graduating class of one of our schools of nursing, Dr. Faye Abdellah, reminded the new graduate: " . . . you have been better prepared educationally than the nurse of yester-year and you have the fundamental knowledge to meet your patients' needs—*if you have the time to spend with them.* Research can help nursing find some of the answers to this dilemma. A recent study showed that patients want and will demand more professional nursing care. Why has nursing failed to meet this challenge?

"Understanding the patient's behavior, regardless of his age or ethnic group, is a crucial function in planning for and helping the patient to coordinate his care. Thus far, research has shown that the nurses' activities which are most important to her involve human relation skills. The essence of any human relation skill, such as the art of listening, is having compassion for the patient. This is the hallmark of our profession, and nursing's most priceless ingredient. . . . "

And so it is that I propose the duties we ask the professional nurse to relinquish—if relinquish she must—be the behind-the-scenes activities, and not those that provide opportunities for nurse and patient to share experiences together. Let me suggest that in order to preserve professional nurse and patient "togetherness" we train ancillary personnel to perform those mechanic endeavors of nursing that are removed from the patient.

For example, medication preparation is a case in point. The preparation of medications requires such skills as careful reading and close adherence to written orders. It does not require the capacity to analyze and to compound nor the need to be conversant with drugs, their ingredients, and all possible reactions they might occasion. The physician who prescribes must know these things; the pharmacist who compounds must know them; the nurse who will administer and observe must know and recognize them; but this knowledge is not necessary for the party who places them in the medication cup (or prepares the hypodermic syringe), affixes a name thereto and places them nicely on a tray. No inductive or deductive reasoning is required in these important, but rather simple, processes! Or why should

not all preparation of medications occur in the pharmacy itself? Let the nurse administer, but let another prepare. The administration involves humanics—the preparation, mechanics.

Furthermore, why not carry this matter of medications over to the preparation and application of treatments. The preparation of treatment materials, equipment, and supplies in areas removed from the patient can be relinquished to another. Let the giving of the treatment, however, be one more experience shared by patient and nurse.

Mrs. Kreuter, to whom I referred earlier, maintains, "The administration of medicines, tests, or treatments, or assisting with their administration, is a nursing operation akin to cure, but it need not be care. It is only care when the administration is directed to assisting the patient through the experience; and any assistance to the doctor, the therapist, or the technician has to be subordinate to this care for the patient."

If more RN functions need be surrendered, let me suggest that a carefully trained clerk can accurately check orders; transcribe them onto a card index; prepare the prescription form or the requisition; verify, review, and reconcile. Let the clerk check linen, stock, and provision lists; order replacements; and serve as the general-supply officer for the division. For such mechanics she need not be a student of physiology nor need she possess a knowledge of the anatomy or the psyche. She needs only intelligence, the ability to follow directions, and pride in her work.

Neither does it require professional training to spend long hours in scheduling and staffing activities or to handle a myriad of other administrative functions. Why not surrender these "mechanics" to a business manager, as does the artist to his agent?

If the nurse still remains too far and too oft removed from the patient's bedside, let me suggest we take a look at our charting practices. Why must charting occur at the nursing station rather than in the patient's room? I question if the reasons that quickly spring to mind are really valid. Charts can be kept in a patient's room yet still be entirely inaccessible to the patient and his visitors.

NUMBER OF RN'S (FULL-TIME EQUIVALENTS) ON THE STAFF AT THE THOMAS D. DEE MEMORIAL HOSPITAL AND NUMBER OF DAYS OF PATIENT CARE RENDERED—1953 THROUGH 1960.

Mr. Knapp's plea for the revitalized image of the nurse as a humanitarian has a concrete expression in the number of RN's added to his hospital's staff as correlated with the number of days of patient care given. The following shows the extent to which the Thomas D. Dee Memorial Hospital is moving toward returning the RN to the bedside.

Year	*Number of RN's*	*Number of Days of Care (Including Newborn)*
1953	61	64,030
1954	79	59,738
1955	88	59,757
1956	111	58,175
1957	111	63,822
1958	118	62,365
1959	119	63,698
1960	122	65,521

For the first six months of 1961, the Dee Hospital has averaged 130 full-time RN's, or the equivalent, on its paid staff. As of June, 1961, there are 142 full-time RN's on the hospital's payroll.

Maybe by writing his orders in the chart while he is still in the patient's room, the physician who promises he will arrange for certain medication, treatment, or privilege will be less likely to overlook his commitment than now occurs with charting being done later at the nursing station.

Remove this one irritant alone, and nurse-patient relations will improve. Or, perhaps you would prefer, electronic devices are now available by which entries written at the patient's bedside are simultaneously transmitted and recorded at the nursing station where a clerk can affix them to the chart.

What is good patient care? It is the function that brings royal dignity to nursing. I submit that above all other considerations good patient care must radiate love, compassion, and understanding so seduously tendered, so fine, so great and yet so simple that its power dispels pain as light does darkness, banishes fear, rekindles hope, restores faith, sustains life. Good patient care inspires, recreates, uplifts, and renews.

When great misfortune settles down upon the patient, when sorrow, disease, and suffering close in, magnifying his discouragement and his depression, only the humanics in nursing can meet the challenge.

Give good care and no appeal from the patient is required to utter his need or evidence his grief. Freed from outside distractions the nurse senses, and sensing is immediately present without the need of a summons. Her mind and heart dictate the actions of her physical being, for the body is slave to the mind and subservient to the heart. She is professionally trained to know how to understand, soothe, sweetly console, comfort, reassure. She has learned how to surrender her own needs to the patient's, giving him her strength because his is the greater need. With her skill she stimulates courage and closes the door to awful desolation and fear. She plans a new hope, allays grief and pain, resurrects the will. Through training and experience and the development of her competence she exercises thusly the power of her highest self and the great skill of her profession.

This is good patient care! Without it, tragedies are committed daily in our hospitals giving validity to claims of calloused understanding, lack of heart, cold indifference, poor service.

In one of the nursing journals Dr. Faye Abdellah has presented some amazing statistics and comments. "The 'average' nurse today is a graduate of a three-year diploma school of nursing, works in a general hospital, and spends, on the average, eighteen minutes with each patient every eight hours, or six minutes more than she had to spend with patients as a senior nursing student. She prefers to take care of the male surgical patient, preferably single, although she sees little of him, for 85 percent of her time is spent on activities away from the patient."

"Eighty-five percent of her time is spent in activities away from the patient"—85 percent of the time of the only people we have trained in the technic of rendering the highest quality of care. Mrs. Kreuter, reporting on the four-year study previously mentioned, says: "In one state in which we carried out a precise study on care, it was found that 90 percent of the direct personal care was in the hands of aides, which means that only 10 percent remains in the hands of nurses. As we ob-

serve we find that even this amount of time being spent with patients is more in the administration of the technical than it is in the administration of the comforting. So this is what we are." Need we ask what should be done to improve patient care?

I propose we set out now to reverse this picture so that the average nurse of today spends 85 percent of her time in activities at the bedside. Do this, and watch the image of the nurse be restored. Watch patient complaints virtually disappear. Watch the reputations of our hospitals soar. Do this, and we will offer a quality of patient care unequaled in the present or any other era.

I plead for the return of the image of the nurse. The image of a woman consecrated to the inspiring professional ideal of human service. Less the image of the "efficient and controlled practitioner" and more the image of a great humanitarian. Not every nurse a Florence Nightingale, but every nurse instilling the Nightingale spirit into nursing.

It is unlikely, however, that this crusade will be successful through the magnificent practice of "humanics" on the part of only a few brilliant nurse practitioners. We must strive to produce these same great qualities (in smaller, humbler ways, perhaps) in thousands of nurses throughout the country. Then and only then will nursing practice offer the public the best in patient care.

Opinion Survey Reveals Patient-Staff Disagreements

By Barbara Sloane

Miss Sloane is a senior at Boston University and is majoring in government. As a volunteer at the Hackensack Hospital she became interested in the effects of an audio visiting announcement and conducted, tabulated, and interpreted this survey.

The difference of opinion between hospital staffs (especially physicians and nurses) and patients as to what is "best for the patient" is becoming wider in scope. Of course, in the case of medication and treatment the opinions of the physicians are ultimate. But in the case of service and comfort there may be merit in giving more consideration to the feelings and desires of the patient.

One illustration of a patient-staff disagreement in opinion turned up during a survey taken at the Hackensack (N.J.) Hospital to determine the effectiveness of a visitor-control announcement. The hospital broadcast this announcement over the audio-page system during the two-hour visiting period in the afternoon and at night. The survey—which ran from June to September of last year—was designed to measure patients', visitors', and personnel's opinions on various aspects of the announcement's influence.

The announcement itself was:

May I have your attention, please. Visiting is limited to two visitors per patient on the floor at any one time. Please limit your visit to 15 minutes. Prolonged visiting endangers the health of the patient you are visiting and all other patients on the floor. Visiting is a family affair. If you are not a member of the family, please make your visit short so that the family may have more time with the patient. If you are a visitor and you wish to smoke, please come downstairs to the main lobby."

A questionnaire consisting of six questions was distributed to 100 patients, 100 visitors, 50 physicians, 100 nurses, 25 volunteer workers, and 11 registration (admissions office) workers. The returns ranged from a high of 100% for the registration workers to 95% for patients, 76% for volunteer workers, a 56% for visitors, 44% for physicians and 43% for nurses. Since the opinions of registration were usually in accord with the doctors, for purposes of analysis "staff" consisted just of physicians and nurses. (The opinions of the volunteer workers vacillated between the doctors' and the patients'.)

Results of the questionnaire brought out some interesting divergencies of opinion between patients and visitors on the one hand, and the staff. For instance, when queried on the length of the announcement, 80.2% of the patients and visitors felt it was just right. The majority of the staff (69.4%), however, felt it was too long. In another category, 70.9% of the patients and visitors felt the announcement was in good taste; 67.5% of the staff felt it was not. (The negative approach of the staff manifests itself in the comment that "the announcement lowered the decorum of the hospital to that of the page-system in a department store.") Even assuming the announcement was appropriate and would be continued, the majority of the staff favored having it read less often (once per hour) than the patients did (every 15 or 30 minutes).

The most pertinent results came in the subjective opinions concerning the effect of the message on patients, visitors, the public, and fellow employees. In this area, only 20% of the patients and visitors felt the announcement had a bad effect on the patients, whereas 55% of the staff was of this opinion. Likewise, only 19% of the visitors and patients felt the announcement had an adverse effect on visitors, whereas 28.6% of the staff was of this opinion, and 52.4% felt it had no effect.

In conclusion, the one fact conclusively shown by this study is the difference of opinion in many matters of human relations concerning the administration of a hospital. In matters not directly vital to the recovery of the patient it might behoove the enlightened hospital administrator to consult the patient more frequently. As Martin Ulan, Hackensack's administrator, points out, "How many of us consider the patient's feelings? Do we assume too readily that we know what is best?"

What can an employee morale

By Virginia E. Jones*

From the dearth of information available on hospital-tailored morale surveys, one might draw the conclusion that there is little this type of program can contribute to hospital management and its employee relations program. Although some such surveys have been conducted and a certain amount of data has been published in a few periodicals, morale surveys have not gained the foothold in hospitals that they have in industry.

It does not follow, however, that survey programs are inapplicable or impractical for hospitals. Several reasons have militated against their widespread acceptance: (1) hospitals have been slow generally to institute modern personnel practices; (2) some hospital managements still seem to believe that employees work simply for the love of humanity; and (3) morale surveys cost money and are most effective when administered by skilled people. Hospitals often find it difficult to pay for such a program.

Yet morale surveys can offer a valuable contribution to personnel practices in hospitals. As Dr. Malcolm MacEachern[1] pointed out, hospitals are people—all kinds of people with all kinds of attitudes and dispositions. Morale is certainly just as important in a hospital as it is in any other organization. It has been estimated that "less than 40 percent of the hospitals have written personnel policies and very few have given sufficient, if any, thought to grievance procedures."[2] Yet, according to Dr. MacEachern, employees represent between 60 and 70 percent of the hospital's expenditures.

Basically, "morale" is simply the way people feel about things. Employees have attitudes about such factors in their work situation as the physical facilities; their job security; their ability to supervise and to work with people; their technical competence; employee benefits; advancement opportunities; compensation; management; the demands of the job; the adequacy of upward and downward communication; and the efficiency of the local operation.

The morale survey is in essence a communication device through which employees may speak to management about these things. The properly conducted morale survey will provide management with information about (1) the general level of morale in the organization; (2) the strengths and weaknesses which exist; (3) the attitudes of employees about specific areas of morale such as personnel policies, operating practices, employee training, and so on; and (4) the effectiveness of management-employee communication. With this knowledge management is in a better position to take positive action: to build on strengths and direct constructive efforts at the roots of existing weaknesses.

It would seem, then, that the aid a morale survey program can give is both important and valuable. Yet, understandably, certain doubts and hesitations can exist when an organization is embracing a survey program for the first time. There is a fear that the survey will stir up problems or cause discontent. Yet one firm active in this field states: "The evidence indicates that if employees have a chance to air their feelings their attitudes generally improve."[3] Some executives believe that employees will not give honest answers. Yet, "experience shows that most employees give frank and

*This article is adapted from a paper which won honorable mention in Topics' 1959-60 editorial competition for graduate students in hospital administration. At that time Miss Jones was finishing her academic work at the School of Hospital Administration, Northwestern University, Chicago.

survey contribute to hospital management?

sincere answers."[4] And there is a feeling that employees are apt to be destructive rather than constructive in their views. Yet, "employees' constructive opinions and suggestions far outnumber unrealistic ideas that disregard organization needs and problems."[5]

Other objections to a survey are less specific. Management people sometimes say that, like the poor, chronic complaints will always be with them. While it is true that everyone cannot be satisfied about everything, nevertheless chronic gripes are often symptoms of underlying problems which can be very serious. The number and intensity of these kinds of complaints are an excellent barometer of general feelings in the organization. An increase in complaints, or a significant number of constant gripers, often indicate employee attitudes are generally unfavorable and morale is low.

Perhaps it would allay management's doubts about the value of a morale survey to explain the operation of the program. The most common method combines a well-designed questionnaire with employee interviews. The questionnaires—which are filled out on an anonymous basis—contain a number of statements with which employees may agree or disagree; the responses reflect the types of things most important to the employees. In addition, space is generally provided for written comments by the employees.

The questionnaire will tell management *how* employees feel. But it does not explain *why*. For this, a special type of nondirective interviewing is employed. This is a technic whereby a trained interviewer listens intently to comments on whatever subject pertaining to the work situation the employee wishes to discuss. The interviewer refrains from giving advice, suggesting topics to be talked about, or showing any authority. However, he does utilize technics designed to help the employee express his opinions freely.

All information divulged from the questionnaires and interviews is confidential to the extent that the survey people will neither show management individual comments employees have written nor repeat remarks employees have made during the interviews. It is, of course, ethical to describe the attitudes of the group; but this can be done without identifying any individual employee. (Additionally, survey people are very disturbed if executives threaten employees before a survey starts or use the final results in a punitive way.)

Hospitals which presently have good personnel departments may object that their "open-door" policy can elicit the same information as is provided by the morale survey. However, it is common knowledge that in most cases the person sitting behind that open door would soon be out of work if his job depended upon the number of employees who voluntarily came to see him. Many employees have an understandable hesitancy about discussing certain matters with management, or even with their immediate supervisor. Their job security and/or career future may be jeopardized by comments they make.

Ideally, a morale survey should be conducted once a year. From a practical standpoint, however, a survey held once every three years would be helpful. Executives and all employees below the top level of management should be included in the survey. All executives and supervisory personnel (as well as the union, if one is involved) should be told in advance that the survey

is being planned, and they should be given a clear understanding of the procedures and value of the program.

From the questionnaires and interviews a written report is prepared, composed of profiles in which the questionnaire results have been graphically portrayed and the findings have been interpreted. The report will indicate the general level of morale as well as strengths and weaknesses found both for the unit as a whole and for various employee groups. (By the way, if 15 or more employees are in a job group—for instance, accounting clerks or laboratory technicians—these employees can be asked to code their questionnaires. This way management can determine the group or groups which have the most or least favorable attitudes in the organization.)

A good deal of study usually follows receipt of the report. Management, key staff members, and department heads should review the findings, discuss solutions, and plan corrective action. Follow-up is a vital part of this program and a very important ingredient in its success. "Once the survey is completed," says the testing firm quoted before, "employees look for action. It is not good for them to say, 'We had a survey and nothing was done about it'."[6]

"Some of the problems revealed by the survey," this firm continues, "do not lend themselves to an easy solution. Take for example a department that feels isolated from the rest of the organization—a low-status group that feels 'left out' of things. Remedial action involves a long-term program to build the status of the group. It is a good plan to follow up a survey with some definite action that will become known to all employees, such as the correction of specific working conditions or operating problems. Employees will know, then, that management is interested in the survey results and is taking action."[7] The actions taken can be communicated to employes in the report which management makes about the survey results.

Now the final problem arises as to who should conduct these surveys. A large organization with branch offices might set up its own survey personnel in its main headquarters. In a single hospital, however, it is not feasible to keep even a small staff of trained survey people on the payroll. Nevertheless, morale surveys can become a part of even the small hospital's personnel practices. Consider any of these alternative methods:

(1) Organizations* exist which conduct surveys for a fee. Whether or not the expense for such a survey is justified is something that each hospital must decide for itself.

(2) Some opinion research organizations** have "do-it-yourself kits." Using this method, someone in the hospital (preferably the personnel manager) working with a steering committee of hospital executives can administer questionnaires, score them, plot the results on profiles, and, with the aid of a manual, make an analysis of the survey results. (A new administrative resident could be a wise choice to conduct the survey since he does not know the employees and presumably has no biases about the particular hospital organization.) While handling a survey internally is not as valuable as using a trained professional staff, it is far better than no survey at all—as long as everything is done on an ethical basis. For the questionnaires, certain standardized forms are available from various testing firms. These are satisfactory, especially if some statements are added specifically for the hospital organization.

(3) A hospital might administer and score its own questionnaire, but hire trained interviewers for the interview portion of the program. In this way a complete survey could be accomplished at less cost than if consultants were used for the entire program.

(4) If a member of the hospital board is connected with a company which already has such a program it might be possible that trained personnel of this company could set aside sufficient time to conduct the survey without charge.

(5) An organization such as a hospital council might employ a few people skilled in morale survey technics who in a large metropolitan area could be kept busy conducting surveys in local hospitals throughout the year.

(6) The American Hospital Association could establish a morale survey program division. (The Joint Commission on Accreditation of Hospitals is a very good example of one kind of survey which was originally developed by the American College of Surgeons and later shared with others to meet a real need in the hospital field.)

No morale survey, however frequently and skillfully conducted, will remove the need for good, sound personnel practices on a continuing basis. Even so, a morale survey does implement a personnel program; it can be just as meaningful as a program of preventive medicine and should be given thoughtful attention in the hospital field.

"Our problem seems to be how to make things more pleasant without increasing their length of stay."

*To name a few, the Industrial Relations Center of the University of Chicago; Science Research Associates, Inc., Chicago; Social Research, Inc., Chicago.

**Science Research, Inc.; and the Industrial Relations Center, University of Chicago.

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HURRICANE CARLA an Unwelcome Visitor at U of Texas Med Center

Planning for the unwelcome visit of Carla began at the Medical Center of the University of Texas—which lay directly in her path—on Friday, September 8—four days before the tornado crossed the mid-section of Galveston proper.

It was on Friday that the hospital disaster committee first met to make plans and preparations. The Medical Center, which is composed of about 25 major buildings, was categorized into three groups: a major disaster-care, refugee, and headquarters area which included a group of four buildings connected by second-floor bridges (the John Sealy hospital and its wings, an outpatient building, and two basic-science buildings); a second group of buildings (three psychiatric hospitals, the TB hospital, and certain shops) which were isolated but actively functioning; and the remaining buildings which were essentially abandoned for the storm's duration.

On Sunday morning, the hospital went on alert with the 7 a.m. shift. Hospital personnel from medical staff to workmen had been offered shelter and provisions in the hospital for themselves and their families, and several hundred dependents arrived. A disaster-plan meeting was held with the executive dean and director, the acting chief of staff, and senior staff members from each clinical area. Preparations were made for mass casualties, a morgue, message distribution, milk and food distribution, and trash and sewage disposal.

For coordination of communications, a central headquarters was established in the director of hospitals' office to serve as an organizational center where all units would report plans, procedures, and problems requiring decisions by the executive dean and director in charge. Major responsibilities were delegated for six areas of the hospital and its activities, and area chiefs set up individual team organizations. Disaster preparations were made on all clinical areas.

Rain-gear—two-piece trousers and jackets, knee-length and hip boots—was accumulated for those working outside. Enough was found for 75 men; it was barely adequate. Railroad-type kerosene lanterns, flashlights, gasoline lanterns, and fuel and batteries were laid in. Extra gas was obtained for the trucks, jeeps, and tractor; sand and burlap bags for diking door-stops through low areas; the three portable water pumps were checked.

To keep the telephone system functional, the communications department obtained extra supplies, spare power, and manpower reinforcement. Squads of volunteer runners were arranged for in case of communication breakdown.

Perhaps the least glamorous—but most burdensome—problems and demands were imposed on housekeeping, in its broadest sense. Preparations began on Friday by moving from basement to second floor such items as

Shock, grief and fatigue are evident in these women who took shelter from Carla at the Medical Center of the University of Texas in Galveston, which was virtually turned into an island by the lashing wind and rain.

A self-sufficient island, which by reason of realistic planning and precision teamwork, gave refuge to some 4500 persons—3500 citizens, 700 patients, and 300 employees—during the course of the hurricane.

Flooding, disruption of communications and steam supply, and failure of city electric power were coped with so that all were given comfort, food, and a sense of security.

paper towels, hand soap, plastic bags, and exterminating supplies and equipment. On Saturday, lab equipment was moved above anticipated high-water marks; areas were readied for the expected influx; spare beds were moved from storage to elevator alcoves, corridors, doctors' offices, and laboratories. Thousands of books were transported in a hand-to-hand line from a basement medical library to the main floor.

By Saturday night, then, the hospital which the wind and rain had virtually turned into an island had—almost literally—battened down hatches.

Starting Saturday night, mopping activities rose to a major task, mounting in direct proportion with the arrival of evacuees and others. Nine wet-pickup vacuums were constantly in use until the power failed; then the work was continued by hand. This was a constant operation for three days. Demands for linen rose through Saturday night, and a previously agreed-upon priority plan was put into effect.

By Sunday the kitchen was preparing meals for approximately 4,500 persons: 700 patients, 300 employees, and about 3,500 people seeking refuge in the hospital.

The real problems began at 4:30 a.m., Monday when the main hospital basement flooded. About 60 percent of the hospital rises above a basement housing all the building's utility services. Part of the other 40 percent is crawl space. The main basement space is protected from flooding by heavy structural concrete walls which in the past have always been impervious to high tides. During Carla, however, the tides rose to ten and one-half feet and a large section of the floor in the crawl area disintegrated under the rising water pressure, allowing the water to gush upward into the crawl area's air space, and from there through manholes into the basement proper. This flooding interrupted the air-conditioning, compressed air supply, electricity for kitchen power, kitchen refrigeration, and elevator service below the second floor. Dozens of pieces of essential and auxiliary equipment were damaged or decommissioned.

The basement's flooding also shorted out 2,100 telephone cables there, killing all service in the main hospital and its units. (Within a half hour, however, emergency cable had been strung and within 90 minutes instruments had been put into service.)

In addition, the steam supply to the hospital, normally piped through the basement, was continued after the flooding to provide steam for cooking, hot water, autoclaving, and so on. But late Monday night these services had to be discontinued because the steam in pipes passing through the flooded basement was boiling the flood waters.

To add to the troubles, the water pressure in the hospital had begun falling Sunday night due to high-water conditions at Galveston pumping stations. When the basement flooded it also knocked out basement water-booster pumps, limiting the water supply to the first two floors of the main hospital building only, with enough pressure to flush commodes only on these floors.

Carla's second blow came less than 11 hours later when the Galveston city electric power failed because flying metal roofing sheets shorted out the overhead power lines. One of the center's two emergency diesel generators automatically went on, maintaining power to the emergency room, operating rooms on three floors, blood bank and blood-bank refrigerator room, emergency lights in corridors and stair-wells, generator-room lights, some elevator lights, basement lights, sump pumps, sewage ejectors, and vacuum pumps. Shortly after, the second, manually-starting generator began operation and restored power to other elevators, O.R. exhaust and supply fans, steam condensate pump, and air supply to emergency minor surgery.

Meanwhile, routine, on-schedule periods of housekeeping had been managed with the help of scores of volunteers until the power failed. By this time, the buildings were supporting their peak load of evacuees. The main problems concerned growing accumulations of trash, lack of flushing facilities in upper-story commodes, failure of elevator service, and literally working in the dark in many areas. Trash was collected in containers and carried by hand to the first-floor service entrance, where it was put into packalls. These were shuttled back and forth and emptied into the hospital truck, which held two-days' jam-packed supply before it was taken (in a somewhat dramatic journey through flooded streets) to the city dump. Special problems were posed by the failure of the water pressure. Fortunately, the ground-floor commodes remained functional and were used to emit all water-disposable matter (another 18 inches more water in the basement, however, would have knocked even these out of commission).

The hospitals' normal laundry service demands, averaging about 12,000 pounds daily, grew rapidly during the early hours of the emergency. Operating the laundry was impossible; but late Sunday a hotel and a laundry chain in Houston sent high-wheeled trucks into Galveston which removed 30,000 pounds of laundry. The operation was repeated and supplies replenished three days later.

On Sunday the kitchen had power and prepared hot meals. Later, when the power was off, sandwiches (6,000-8,000 per meal), milk, fruit juice, and fruit were served. There was no shortage of food and very little spoiled since the freezers were packed with dry ice. On Wednesday afternoon steam and electricity were restored for cooking equipment by running a cable from a vault outdoors through a kitchen window.

Perhaps one of the most serious effects of the city power failure was on the hospitals' telephone system. There are about 2,200 telephone instruments in the medical center: 350 of them in the main hospital buildings. All are operated from a four-position switchboard. When the power failed, the system automatically switched to the center's battery-powered auxiliary unit. Although this held up for the next 22 hours, power then diminished quite rapidly until it was insufficient to ring the instruments' bells. This lack of communication left the hospital system next to useless for a two-hour period which ended only when city power was restored.

At 3 a.m. Tuesday, the tornado crossed the mid-section of Galveston city, 15 flooded blocks from the hospital and the stream of evacuees to the center quickened.

Throughout the entire period of the storm, a total of 273 persons were brought to the hospital for treatment, although only 23 admissions were tagged as disaster victims. The majority of effort was devoted to maintaining "normal" operations (for example, during the hurricane period, 17 babies were delivered, three by

(Continued on page 61)

Operation Coffee Cart

A tenth-century Arab physician declared that a cup of coffee "fortifies the members, cleans the skin, and gives an excellent smell to all the body." While the medical profession no longer attributes such all-encompassing powers to the coffee bean, it cannot be denied that a cup of coffee does fortify. This fact served as inspiration for "Operation Coffee Cart," a small but significant contribution from Lankenau Hospital, Philadelphia, to better patient care.

While coffee carts are no innovations on maternity floors, Lankenau—upon popular request—provides a pre-breakfast coffee service to *all* its patient floors (except maternity, which breakfasts first).

Early rousing of hospital patients is, of course, a must. But it doesn't make the long wait between getting up and breakfasting any more pleasant. In fact, in an opinion poll conducted among discharged patients from Lankenau, this gap between waking and eating led in all patient complaints, especially from those who had been lodged on the hospital's last floor, the sixth. There the patients were awakened at 7:30 AM and—since the dietary staff can serve breakfast to only one floor at a time—they did not eat until 9. "Meanwhile, you lie there with your innards grumbling, hating the world and all its inhabitants," a former sixth-floor patient complained in the poll.

As a remedy, last March Lankenau launched a crack-of-dawn coffee break on the sixth floor. Promptly at 7:30 AM a cart bearing a five-gallon thermos started rolling from room to room, dispensing cups of steaming coffee. The patient reaction was more than enthusiastic. "The greatest advance in hospital care since the invention of anesthesia," pronounced one patient.

The nurses also applauded the procedure. "Some patients used to be positively unbearable first thing in the morning," reported the sixth floor's head nurse. "But since the coffee cart started its early morning rounds practically everybody awakens with a smile."

Several months after the introduction of the coffee routine on the sixth floor, the hospital had to extend it to all the other patient floors, too. Patient pressure had prompted the extension. As word spread about Operation Coffee Cart, incoming patients were beginning to balk at being assigned to any but "the coffee floor."

Unable to sit up, patient drinks her early morning coffee through a straw. One patient called Operation Coffee Cart "the greatest advance in hospital care since the invention of anesthesia."

Since debut of pre-breakfast coffee break at Philadelphia's Lankenau Hospital patients awaken with a smile, fortified for the wait between getting up and eating.

Early-morning coffee rounds are "just what the doctor ordered," according to one ambulatory patient. Opinion poll of discharged patients led to inauguration of the system when it was found that the biggest single complaint of discharged patients was the time gap between waking and eating.

Community Planning for Hospitals **Fourth in a series**

Measuring the Requirements For General Hospital Beds

By Sigmund L. Friedman, M.D.*

The previous articles in this series dealt with the more important theoretical and practical problems underlying community planning for hospitals. This article will concern itself with the methods used to measure the requirements for general-care hospital beds.

The importance of clear definitions was very well stated by Palmer: "First of all, it must be decided whether it is present demand or future demand, present need or future need, or a point lying somewhere between the demand and the need. The medico-social ideal would be to have enough beds to accommodate every person *needing* care. The economic goal would be enough beds to accommodate the existing (or potential) *demand* for hospital care."

Palmer then proceeds to define the population to be served, which "should include not only those persons living within a city or region, but also nonresidents who will be receiving hospital services within the area," and points out that "the types of beds to be included in the count should be spelled out. Bed requirements cannot be measured until it has been decided, for example, whether all types of beds for acute care are to be counted together; whether certain types, such as communicable-disease beds, are to be excluded; or whether acute and chronic beds should be counted together."

The mathematical formulae that have been devised to measure bed requirements have taken these factors into consideration, but no formula can take into consideration *all* the economic, social, and medical factors that influence the effective demand for beds and hospital care. As pointed out in the previous articles of this series, there are many such factors, ranging from the climate and topography of the region through the availability, utilization, quality, and nature of existing medical facilities, to the composition, characteristics, and health patterns of the population.

The "answer" derived from a formula can serve only as a guide to the number of beds needed, and must be subjected to thoughtful scrutiny and mature judgment before being applied to a specific situation.

The importance of judgment in the use of the various formulae cannot be stressed sufficiently. This is underlined by some recent work both in England and the United States pointing to the relationship between the presence of beds and their utilization. Forsyth and Logan state that "it appears that the number of beds used is the number available!" Though these conclusions may be overstated, the mere possibility that they may be correct must be taken into consideration by the hospital planned.

One type of formula relates the number of beds directly to population. For example, the Public Health Service in 1945 developed a ratio of 4.5 beds per 1,000 population for general hospital beds. This figure was admittedly a compromise between a theoretical ideal and a practical achievement; it was finally accepted as a reasonable standard of adequacy.

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Another type of formula is represented by that developed by the Commission on Hospital Care, which suggested the bed-death ratio as a basis for determining hospital bed needs. The commission stated: "Sickness is correlated with mortality. Most deaths are preceded by a certain amount of sickness; and each disease has an effect on mortality rates and life expectancy. Therefore, the number of deaths in an area may be used as an indication of the amount of hospital care required."

The commission found "that the public uses about 250 days of general hospital care for each death and correlated sickness cared for in a general hospital. This relationship may also be expressed in terms of the number of occupied beds (average daily census) per death by dividing the 250 by 365, which equals 0.685, or about 0.7 bed. This is called the *bed-death ratio.* It signifies that for each *hospital* [italics ours] death 0.7 bed is used for one year. The practical value of this ratio is in using it as a prediction factor—for estimating how many additional hospital beds would be needed if additional death (and correlated sickness) were hospitalized."

Though the formula is based on the number of known deaths, the determination of the number of persons hospitalized at the time of death is a matter of judgment. The commission felt that, for the nation as a whole, "an average level of hospitalization whereby at least 50 percent of deaths would occur in general hospitals would appear to be well within reason."

The formula is then applied as follows: "The death rate in the nation (average 1939 to 1943) was about 10.6, 50 percent of which is 5.3. Based upon this assumption, the number of occupied beds 'needed' in the nation, therefore, would be 0.7 (national bed-death ratio) times 5.3 which equals 3.71 (occupied beds). If the prevailing occupancy rate of 1944 is assumed (74.8 percent), then the total beds needed in general and allied special hospitals would be 4.96 or practically 5.0 beds per 1,000 population. . . .

"A similar procedure could be used in estimating the number of beds needed in any state."

Still another type of formula is that developed and used by the Hospital Council of Greater New York:

"Briefly, the Hospital Council formula states that the population of New York City requires 0.41 general-care bed per annual death. In the course of its studies the Hospital Council found that the number of deaths reflects the large number of socio-economic characteristics of the community which bear upon its needs for and utilization of hospital facilities and services. Although the master plan also computes ratios of beds required to population, these are always based on bed needs calculated according to the ratio of beds to deaths.

"The ratio of 0.41 bed per annual death was derived from three figures:

"1. 120, the number of general-care patient days per death in New York City;

"2. 80 percent, which is regarded as the optimum average rate of occupancy in general hospitals; and

"3. 365, the number of days in a year.

"The above figures are employed in two divisions:

"1. $120 \div 0.8 = 150$

"2. $150 \div 365 = 0.41$

"This derivation of the factor 0.41 rests implicitly on one basic assumption. It is assumed that during the period under study the people of New York City have been receiving adequate hospital care; that is, they are admitted to a hospital when necessary and they stay in the hospital as long as is warranted by medical considerations. Since deaths in a population are deemed to reflect the need for hospital beds and services, it is believed highly significant that a constant relationship (120 to 1) has existed for some years between patient days in general-care hospitals and the number of deaths in the city.

Division by 80 percent allows for the fact that a hospital cannot always be expected to operate at or near a rate of occupancy of 100 percent. Allocation of beds by type of accommodation, by sex, and by medical service, as well as fluctuations in admissions by season, make for a certain number of vacant beds. For many years 80 percent has been accepted as the optimum annual rate of occupancy for general hospitals.

"The factor 150 multiplied by the average number of daily deaths would yield the number of beds required at a given time. However, the number of deaths is commonly available on an annual basis, not on a daily one. For ease of computation the factor of 1950 is divided by 365. The resulting ratio, 0.41, can be directly applied to the annual number of deaths in estimating requirements for general-care beds."

There are, of course, other methods that can be, and are, used for determining the number of general hospital beds needed in, or demanded by a community. The British have been particularly concerned with this problem since the establishment of the National Health Service. It may be significant that the number of beds envisaged by the hospital planners at the start of the NHS has been reduced to almost half the original figure—to about 2.0 or 2.5 beds per 1,000 population. These revised estimates have been based on studies possible only under a system such as England's.

What the Commission on Hospital Care said of its own formula holds for all formulae, and is well worth repetition: "The most productive use of the new formula can be made only if it is combined with the same good judgment which characterizes any careful study of hospital needs. This formula does not provide all the answers. It does not reduce the problem of estimation to a simple mechanical process. It should be considered as a good point of departure, or as a first approximation to determining need. Many other local factors, unique for every case, must be given due consideration."

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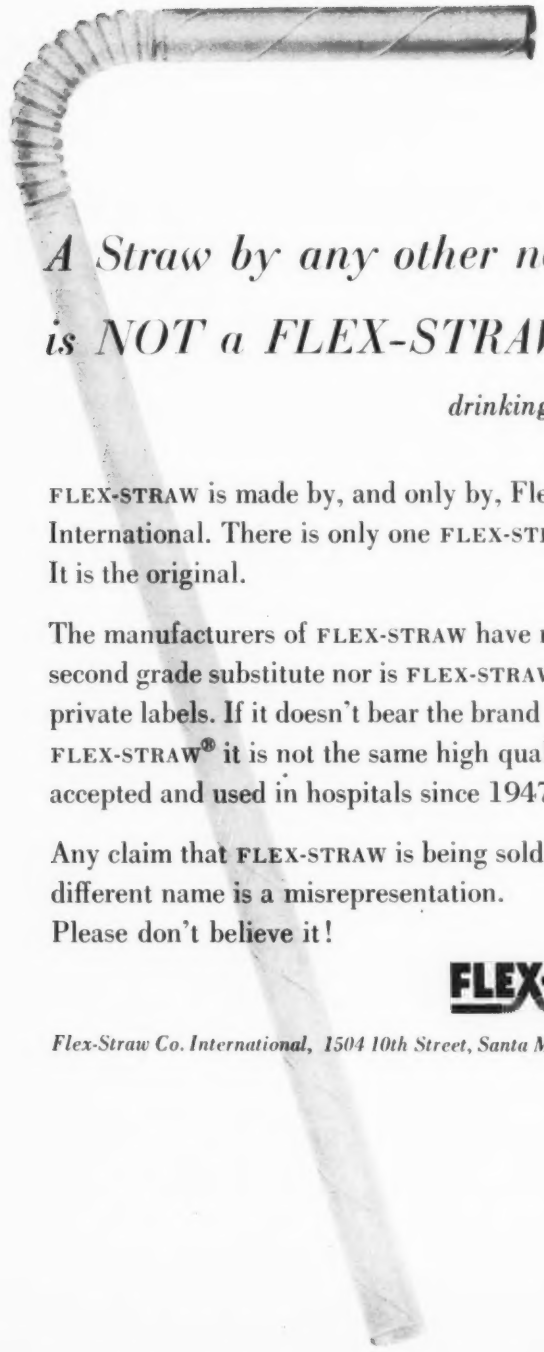

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Consultant's Corner

By John G. Steinle

Q. Should a municipal hospital be more or less concerned over drug losses than a voluntary hospital?
A. Traditional municipal hospitals, providing care principally for those unable to pay for medical services, should be more concerned over inventory losses of drugs than a voluntary hospital. When there is a charging system, as there is in most voluntary hospitals, there is a built-in control. In municipal hospitals which generally have no charge system, these controls are naturally lacking.

In some instances, municipal hospitals have medical staffs paid entirely by the institution. Just because these institutions do not have a high annual bed cost for drugs in comparison with voluntary hospitals, they should not be fooled into thinking that no problem exists. In situations of this kind, in which usually a formulary is strictly enforced, it should be recognized that the inventory costs per bed will actually be from 30 to 40 percent less than in hospitals of comparable size in the area. If they are more than this figure, this is an indication that the drug-inventory losses are comparably greater than those of the voluntary institutions.

Q. Should the joint conference committee bring to the board of trustees a question of establishing a discretionary fund for the chiefs of the various services?
A. This poses two questions—one of substance and one of procedure. From a substance standpoint, in a teaching hospital special funds often are set up which can be used at the discretion of the chiefs of service to send residents and interns for special educational projects. The funds cover such items as travel expense to and from special meetings and conventions.

Usually these funds are financed from some special source in the hospital, such as the charges made for the reading of electrocardiographs and basal metabolism studies. However, this method of special funding has often been criticized by hospital accountants. It is generally agreed that all revenue should go into the general revenue fund and all expenditures should be paid out from this fund. In such a situation it might be well to budget a specific amount which could be used at the discretion of each of the chiefs of service and could be audited against actual use for intern and resident training. It would appear to be reasonable to make an allocation based on the number in each department.

Generally, the needs for special funds are greater for residents than for interns. I would suggest that probably a ratio of 2 to 1 for residents and interns be used in establishing a fund. For example, if it was agreed that $200 should be allocated per resident, the allocation per intern should be approximately $100. If there were eight residents in surgery the director of the surgical service would then have a discretionary fund of $1,600 allocated annually. The director of medical education or person responsible for the internship training program would have $100 per intern allocated to his discretionary fund.

The procedural question relates as to whether or not matters discussed by the joint conference committee should be referred directly to the board of trustees. It must be emphasized that the joint conference committee is not a real operating committee of the board of trustees. It is primarily what the name implies—a conference group—and as such, should not make specific recommendations directly to the board. A better procedure in a matter of this kind would be that the joint conference committee make a recommendation to the finance committee, which then would make its analysis, study and a report with recommendations to the total board of trustees.

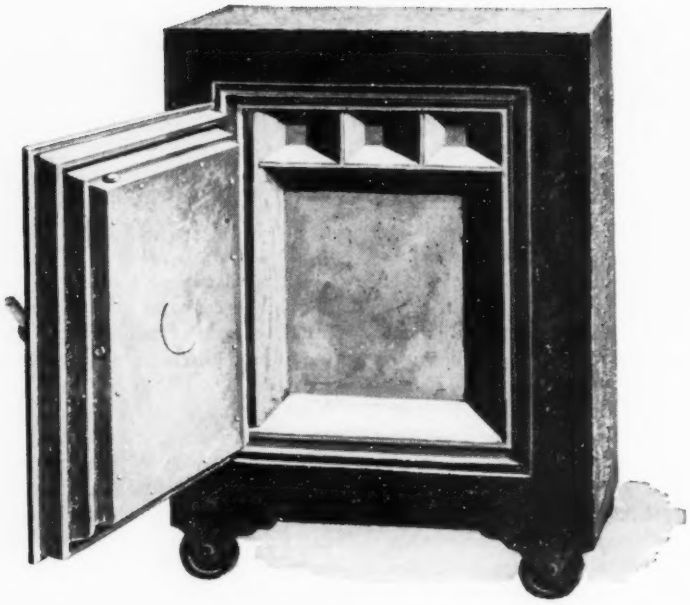
Q. To what extent are antibiotics used in hospitals?
A. There is some interesting information on this subject in the professional activity study Report 35, published by the Commission on Professional and Hospital Activities, Ann Arbor, Mich., on August 15, 1959. This report shows that the range in use of antibiotics in hospitals is tremendous. For example, among the small hospitals—those discharging less than 5,000 patients per year—the variation in practice ranged from a low of 14.3 percent of the patients in one hospital receiving antibiotics to a high of 93.2 percent in another hospital.

By hospital size, the total percentage of patients receiving antibiotics, according to this report, was: in small hospitals, 41.5 percent; medium-small, 34.1 percent; medium-large, 29.5 percent, and large 32.4 percent.

Another very important report from this commission is No. 34, which indicates that in January, 1959, for every five patients given antibiotics, only one had an antibiotic sensitivity test done on his culture.

In my opinion, the wide range in use of antibiotics among hospitals and the fact that such a low percentage of patients receiving antibiotics are given sensitivity tests provide grounds for concern with the quality of medical care in our institutions—particularly since relatively simple tests are now available.

I hope that this problem will receive the prompt attention of the laboratory and the pharmacy committees of every hospital in the United States. It is one which should be carefully studied by the Joint Commission on Accreditation of Hospitals.



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Review of Hospital Lawsuits

By Leo T. Parker, Attorney at Law

• CONTRACT WITH CITY NOT NECESSARY

Recently a higher court decided that a city has no obligation to provide free medical care to persons who are able to pay for it—in absence of a statutory, charter, or ordinance provision requiring the city to do so—and that the law will imply a promise to pay for emergency services to an unconscious patient by a city at its hospital.

In *Crisan v. Detroit, 107 N. W. (2) 907, an* 87-year-old widow without any relatives, Mrs. Crisan, collapsed while shopping. The police department took her to the city hospital where she remained for 14 days. She was then transferred to another hospital—an overflow or city-physician's hospital—which took patients under contract with the city. Eleven months later she died there without ever regaining consciousness.

A city investigation discovered Mrs. Crisan owned her own home, with a value of $7,000; and after her death the city presented a $3,218.30 claim in court against her estate for hospital and ambulance services.

Arguing that the city could not recover any money, the executor for Mrs. Crisan's estate said there had been no meeting of minds of the parties as to charges for the services rendered since neither Mrs. Crisan (because of her condition) nor the Detroit department of health was able to contract. Under these circumstances, the executor claimed, no contract, actual or implied, could arise.

The higher court disagreed, saying:

"It is obvious that there was no express contract or one implied in fact because following her collapse decedent [Mrs. Crisan] was never able consciously to express her assent. Nevertheless, one who supplies services to another, although acting without the other's knowledge or consent, is entitled to restitution therefor from the other if he acted unofficiously and with intent to charge therefor and the services were necessary to preserve the other's life or health. The executor's contention that his obligation to pay must be determined by the decendent's ability, tested during her lifetime, is not tenable."

Mrs. Crisan's executor had also contended the city could not recover because it was obligated to furnish treatment regardless of the patient's ability to pay. In this respect, the higher court ruled:

"We must conclude that the city may charge for services rendered by the receiving hospital. The city is accordingly entitled to recover under a contract implied in law."

And the court held the estate liable for payment of the city's full bill.

For comparison, see *Cotnam v. Wisdom, 104 S. W. 164, 12 L.R.A.N.S. 1090, 13 Ann Cas. 25.* Here the Supreme Court held:

"A surgeon summoned by a spectator in an emergency to attend an injured and unconscious person may recover the reasonable value of his services from the estate of the patient although the patient dies without ever regaining consciousness."

TESTIMONY FOR MALPRACTICE

Can a patient who sues a hospital, physician or surgeon for malpractice use as evidence a medical treatise which is a recognized standard work in the medical profession? NO, a higher court recently ruled. In the case of *Eckleberry v. Northern Hospital, 359 Pac, (2d) 1090,* Mrs. Eckleberry was suing both the hospital and its orthopedic specialist for heavy damages. During the trial her lawyer wanted to read to the jury a certain medical treatise, a recognized standard medical work which was intended to convince the jury that the doctor had been negligent in his treatment.

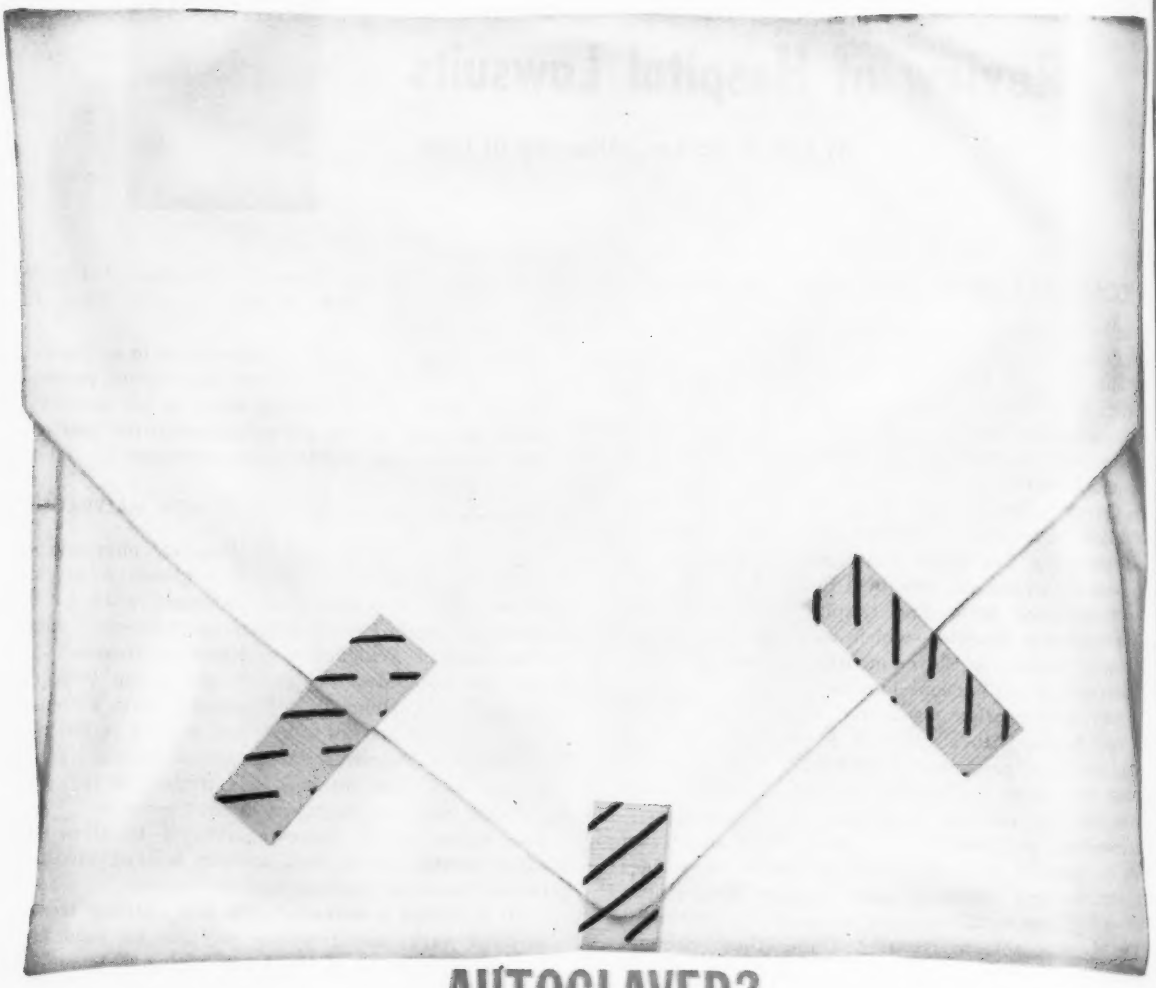
The higher court, however, refused to allow the medical treatise to be read, and—in holding the hospital and the doctor liable in damages—said:

"It is almost a universal rule that extracts from medical works and treatises may not be used as probative evidence of the truth of the statements therein contained, because the author is not present and no opportunity exists to test the accuracy or weight to be given to the author's statements. This rule is not as to medical treatises and textbooks changed."

On the other hand, the higher courts have held that historical facts may be proven by reputation, and that "reputation" may be established by historical works, books and so on, of known character and accuracy. This evidence, however, is admissable only to prove facts of a general and public nature, not those which concern individuals or local communities.

The "facts" which may be proven include such things as the meaning of words and allusions according to ordinary dictionaries and authenticated books of general literary history; and facts in the "exact sciences" founded upon conclusions reached from certain and constant data by processes too intricate to be elucidated by witnesses when on examination. Thus, mortuary tables for estimating the probable duration of the life of a party at a given age; chronological tables; tables of weights, measures, and currency; annuity tables; interest tables; and the like are admissible testimony.

Nevertheless, medicine is not considered one of the "exact sciences." (See *Mills v. Catlin, 22 Vt. 98.*)



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...WHERE RESEARCH IS THE KEY TO TOMORROW

(Continued from page 52)

cesarean section). Although the psychiatric staff had been organized to care for any emotionally disturbed refugees, only one person required such care.

The medical staff also maintained an active program outside the hospital. At the request of various agencies, medical teams had been dispatched early in Operation Carla to shelters throughout the community. They treated tornado injuries (mostly small cuts or injuries from flying glass and timber, and a few sprained ankles); held routine consultations for children with colds, fever, and often minor ailments; organized evacuee areas when necessary, and so on.

The last "emergency" of Carla was reported Wednesday morning when a porch collapsed in the Red Cross headquarters and the medical center treated some 20 persons for minor injuries.

Mopping-up operations continued long after Carla had gone her way. Nineteen Navy reservists from Houston worked from Wednesday evening until early Thursday morning sanitizing all wall areas and floors in corridors, and removing trash and debris.

Friday morning the cafeteria was closed down 16 hours for complete sanitization. During this same period the main kitchen, hospitality shop, barber shop, and beauty shop were also sanitized. More than a normal full-year's supply of disinfectants was used in such areas as the blood bank, surgery, dietary, pediatric-premature, isolation, clinics, and laboratories.

A heavy loss was sustained in pharmacy where—despite supply removal of Saturday—about $50,000 worth of drugs was destroyed by high water and about $10,000 of equipment was damaged or destroyed. However, hospital authorities estimate a recoup of 75 percent of this loss through major pharmaceutical houses' offers to replace losses at no cost.

Carla is just a memory now, gone with the other hurricanes of 1960. Galveston area people are grateful she wasn't worse. But the medical center was prepared: and the assurance and security it offered was, in this case, perhaps more important than the medical care so often regarded as the hospital's primary function.

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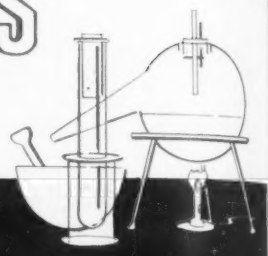

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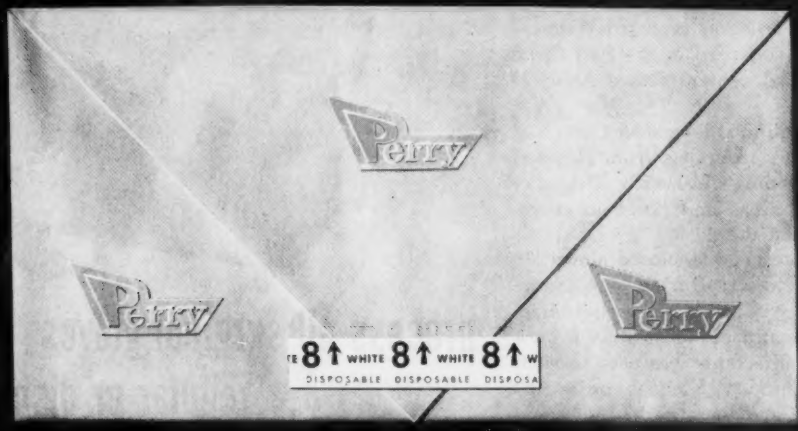

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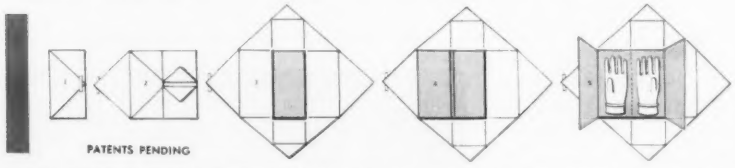

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Pediatrics

Management of Croup in a Community Hospital

By H. H. Shuman, M.D., James W. S. Hartshorn, M.D., Carl W. Janovsky, M.D., and Joel R. Cohen, M.S.*

Croup—acute laryngotracheitis—is still widely prevalent in the pediatric age group. In the past, the majority of these patients were admitted to isolation hospitals. Now, as these institutions are disappearing from the scene, the treatment of croup is becoming the problem of pediatric services in general community hospitals.

We believe, on the basis of our experience, that croup cases can be cared for adequately in a community hospital. Our recommendations for the management of this disease are based on analysis of a series of 246 cases of croup admitted to the pediatric service of the Springfield, (Mass.) Hospital, a 431-bed community hospital, in the 10-year period between April 1, 1950, and April 1, 1960. This figure represents approximately four percent of the total number of pediatric medical care cases seen during this period.

Forty-one of the 246 patients (16.7 percent) required 42 tracheotomies. This small number indicates that medical management is adequate for the majority of cases.

Croup, as a syndrome, is considered here as any acute obstructive inflammation of the larynx, trachea, and bronchial tree. The usual onset was that of an upper respiratory infection, with cough and mild fever. Within a few hours, the patient developed a brassy cough

*From the Springfield Hospital, Springfield, Mass. Dr. Shuman is pediatrician in chief. This article is based on a lecture and scientific exhibit presented by the authors at the 1961 convention of the American Medical Association.

Scientific exhibit on management of croup in a community hospital was presented at the 1961 AMA convention in New York City by Dr. Shuman and associates James W. S. Hartshorn, M.D., Carl W. Janovsky, M.D., and Joel R. Cohen. Here Dr. Hartshorn (l.) a surgeon, discusses post-tracheotomy care with K. T. Johnstone, M.D., Saginaw, Mich.

and signs of upper airway obstruction, characterized by dyspnea, hoarseness, and often aphonia. On admission to the hospital, these patients had edema—red, boggy swelling, involving both supraglottic and subglottic tissues to varying degrees. Though occasionally there was considerable exudate, seldom was a true membrane found. In five cases there was gross epiglottitis.

Incidence

Of the 246 patients, 163 were under 3 years of age, and 19 were under 6 months. The incidence tapered off with increasing age, and was low in children over 7. However, one of the most serious cases, requiring tracheotomy in the emergency ward, was in a 12-year-old girl. The number of males in this series outnumbered females, 2-1 (164 patients were boys and 82 were girls).

The incidence of croup began to rise during the autumn months and was highest throughout the winter. It was at a low ebb during the late spring and summer months.

Organisms Involved

Cultures of the pharynx were obtained when feasible, and tracheal swabs were often taken on operated cases. The cultures were commonly revealed combinations of *Streptococcus viridans, Staphylococcus albus,* and *Diplococcus pneumoniae.* Of five cases clinically showing epiglottitis, and brought to tracheotomy, three had *Hemophilus influenzae* in tracheal secretions. Though no viral studies were done on the patients in this series, it is our impression that many of these cases were of viral etiology.

Treatment

All infants with croup under the age of 1 year were automatically admitted to the hospital, as were croup victims with complications such as cardiac involvement, asthma, and pneumonia. Cases classified as moderate to severe, cases which could not receive the proper care at home, and cases demonstrating supraglottic edema and epiglottitis were hospitalized. Suspicion of a specific etiologic agent, such as *C. diptheriae* or *Hemophilus influenzae,* was accepted as a criterion for admission.

Medical management of croup cases on the general pediatric service includes:

- Encouragement of fluid intake by mouth, without force. As dehydration is not of prime importance, intravenous fluids are not given.
- Use of nurses and nurses' aides who have been trained to have a particular understanding for the needs of children with croup. A sympathetic attendant is most important and may sometimes make the difference as to whether or not a youngster will come to tracheotomy. Often, stable and understanding parents have been used as nursing attendants.
- Administration of expectorants, primarily in the form of Syrup of Ipecac. This drug may help remove obstruction of mucus, and on occasion it gives prompt, even dramatic relief. However, if vomiting does not take place rather soon after this therapy is begun, this approach should be abandoned.
- Use of "cold fog" therapy, which we believe to be the most valuable aid in treating these children and in making them comfortable. Supersaturation is obtained by a "cold fog" method, making nursing care easier. The therapeutic results are excellent. With the adoption of this therapy in place of provision of humidity by steam vapor, there was a decrease in desiccation of the secretions, and apparently a reduction in edema. At no time was it necessary to use oxygen, because these patients' difficulties are caused by mechanical obstruction, not lack of oxygen.
- Routine use of antibiotics—in spite of the knowledge that viral etiology probably plays a very important part in these cases. The reasons for such routine use are: a significant number of serious cases are complicated by bacterial invasion, particularly when surgical intervention is made; a significant percentage of croup cases has been demonstrated to be caused by bacteria or viruses which are susceptible to antibiotic treatment. Where the specific micro-organism is known, a specified selection of antibiotics is made. However, when it is not known, it is considered dangerous to wait for the time necessary for a bacteriological confirmation, and antibiotic treatment is therefore on an empirical basis.

Sedation is avoided in these patients at all times. Because the symptom of restlessness is an important one in determining the need for surgery, masking it by sedatives, even in small amounts, is considered dangerous.

Suction is not used because of the hazards involved in irritating the larynx; intubation is not used because it necessitates the continuous attendance of a skilled intubator.

The use of a well-trained nursing attendant who gives the patient close supervision, is considered of the highest importance. In addition, any child who demonstrates moderate or severe involvement which might require tracheotomy is kept under constant surveillance by both the resident staff and the attending physician.

Tracheotomy

When indicated, tracheotomy is a life-saving measure. When pathology is confined to the spiglottis, or supraglottic tissue, tracheotomy is especially urgent.

Indications for this procedure are: severe respiratory obstruction; extreme restlessness and apprehension; epiglottitis and supraglottic edema; and exhaustion of the patient because of inability to sleep, rest, eat, or drink.

The signs of laryngeal obstruction are:

(1) Retraction of the suprasternal and supraclavicular areas, the intercostal spaces and the epigastrium.

(2) Inspiratory stridor rather than wheezing.

(3) Restlessness and apprehension. Inability to sleep is caused by the absence of relaxation of the accessory muscles of respiration, which are forced into full play to keep the patient breathing.

(4) Hypoxia, as demonstrated by pallor or cyanosis (this symptom is almost a terminal one).

(5) Almost no exchange of air on auscultation of the lungs, especially in the serious cases.

As mentioned earlier, 41 of the 246 patients in the series required 42 tracheotomies. The 41 ranged in ages from 5 weeks to 14 years. Sixteen were under 1 year of age. All but four of the tracheotomies were performed in the operating room; three were done in the nursing unit and one was done in the emergency ward.

Tracheotomies can be performed more safely and more rapidly in the operating suite than in bed. Light

space, correct height of the operative field, and trained personnel aid in the performance of this procedure. The operation in small children is not easy, and unless the child is literally moribund, he should be moved to the operating room.

If an anesthetist is present, he can aid a great deal by positioning and holding the patient. Attempts to pass an endotracheal tube may precipitate complete laryngeal closure, and the situation may become desperate. General anesthesia must not be given unless an endotracheal tube or bronchoscope has been passed beforehand.

Tracheotomies are best handled by those with a special interest in them. The specialty of the operator is of little consequence if he responds at once and maintains close postoperative supervision of the patient. Twenty-six of the tracheotomies in this group were performed by general or thoracic surgeons; six by otolaryngologists, and 10 by general surgical residents.

The anesthetist was present in 23 cases. Seven cases had an endotracheal tube passed, and three tracheotomies were performed over bronchoscopes. There were also several unsuccessful attempts to pass either endotracheal tubes or bronchoscopes.

Postoperatively, these patients do better when they are given detergent aerosol than when they are kept in a "cold fog" room. At times, tracheotomy secretions of patients in the fog room become so thick and tenacious that it is impossible to remove the inner cannula of the tracheotomy tube. When detergent aerosols are used, crusted tracheobronchial secretions are not found.

A tracheotomy collar which allows the use of detergents and/or moisture with either air or oxygen has proved very helpful. It is important to use an isolation technic in caring for these patients and a Y-tube in suctioning them. Oxygen is not used unless there are special indications. It is not necessary and may even be dangerous.

Constant care is needed postoperatively until 24 hours after the tube has been removed. An understanding student nurse or a practical nurse can be of greater assistance than a frightened R.N., unfamiliar with tracheotomies. All new tracheotomies require suctioning, and if the attendant is unable to raise the secretions, they may cause trouble.

There were three postoperative deaths in the 41—all in children under 1 year of age, who demonstrated extensive pneumonitis at autopsy. One death occurred within 24 hours of tracheotomy; one on the seventh postoperative day, just before the tube was to be removed; and the third on the twelfth postoperative day, immediately after the tube was removed. The mortality rate of those undergoing surgery was therefore seven percent—appreciably lower than that reported by other investigators.

There was one other death in the entire series; thus the total death rate was 1.6 percent. This rate also is considerably lower than that reported in other series.

In summary, we have found that croup cases can be adequately cared for on a general pediatric service with the use of: (1) antibiotic therapy; (2) improved methods of providing humidity; (3) good nursing care, and (4) the proper timing of tracheotomies coupled with closely supervised postoperative care, using detergent aerosols, Y-tube technics, and strict isolation procedures.

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Nurse's Role in Croup Management

By Lilian A. Levesque, R.N., B.S.*

When the pediatric nursing staff is notified that a child is to be admitted with a diagnosis of croup, it immediately does three things:

1. Readies the fog room.
2. Makes provision for constant attendance.
3. Checks certain equipment—tracheotomy set and suction machine.

To ready the fog room takes no great effort. It merely involves turning on switches. However, it is important to turn them on immediately, because there is a five- to 10-minute time lapse before full humidification of the room is achieved. The switch panel has simple, explicit instructions, and the pediatric staff has full understanding of the rational of the fog room, so that no problem is encountered here. Functional reliability of the machine rests in the hands of the maintenance department and is very high. The fog room provides minimum, moderate and maximum supersaturation. Moderate supersaturation permits relatively clear visibility, but maximum supersaturation allows good visibility of the patient only at close range.

Visibility is one reason, though not by any means the only reason, for making provision for constant care. The records of all patients admitted to the pediatric unit at this hospital with the diagnosis of croup over a given period of time show that one in six will come to tracheotomy. It is of extreme importance, then, that these patients be watched very closely initially. Constant attendance may be necessary for varying periods of time but is maintained until the medical staff has judged the danger of need for tracheotomy has passed.

The observer makes careful note of rate of pulse and respirations every one-half to one hour. She is carefully schooled to watch for a progression of respiratory difficulty other than by rate alone. This difficulty may be measured by increase in retractions from intercostal to substernal to supraclavicular. Such increased retractions will be associated with flaring nostrils, increased restlessness, and increased apprehension. The restlessness might be extreme: the small child might seem to want to throw himself out of the nurse's arms. The observer is cautioned that a period of quiet which follows a period of restlessness is one of very real danger, for the child may be approaching exhaustion or asphyxia.

During this period of watchfulness fluids are urged but not forced. The clothing of the upper torso of the small patient will be left open or off completely to facilitate observation and yet permit the patient to get as much rest as possible.

The third step mentioned above—that of checking certain equipment—is one of anticipation and preparedness. Even though it is fully appreciated that tracheotomy is best done under operating-room procedure and facilities, the narrow margin of safety in some instances makes necessary this simple practice of having a tracheotomy set and suction machine available to avert possible tragedy.

For the child whose condition warrants a tracheotomy because of croup, the nursing care is very exacting. It is not our purpose here to go into minute detail regarding care of the tracheotomy, but to mention some of our methods which are perhaps slightly different or more specifically emphasized.

Our first principle is that of constant attendance until 24 hours *after* use of a full tracheotomy tube plug. This is done for the prime purpose of providing the greatest degree of safety to the patient, but also to give to the small child some element of security. The infant or small child alerts his parents to his needs by his cry or lack of it. If this safety valve is no longer available, then a trained observer needs to be on hand to watch for overt action that will tell of difficulty. Measures must be taken to compensate for the dependency factor, lack of reasoning power, and limitation of expression—other than voice. Vomiting without warning, for instance, could result in fatal aspiration if immediate help was not present.

Part of this idea of safety must be communicated to the child, since it has been our experience that the child seems to accept the situation with increasing equanimity as long as someone is with him. The degree of sympathetic, understanding, competent care by the nurse is in direct proportion to the sense of well-being and security achieved by the child.

Perhaps another welcome by-product that might be attributed to constant attendance is the fact that no restraints are needed and the child is thus free of that frustration.

*Miss Levesque was formerly pediatric supervisor and instructor at the Springfield (Mass.) Hospital.

Humidification for the patient with a tracheotomy is accomplished by use of a detergent aerosol through a tracheotomy mask. This ensures direct humidity to the respiratory tract, with a resultant earlier loosening of secretions and reduction of the possibility of the development of a mucus plug. An electrical compressor unit is employed to provide the humidity, and the mask has a lengthy, light-weight plastic attachment that permits the child considerable freedom of movement when his condition improves.

Three points are emphasized in particular for immediate postoperative care. The first is frequent suctioning, *whether it seems to be needed or not,* to prevent crusting of blood and trouble with thick secretions the patient might be unable to raise. The inner cannula is removed for all suctioning for more complete cleansing of these secretions. The second point is continued frequent checking of the respirations, with the observer watching particularly for unequal chest expansion indicating the possible development of pneumothorax. The third is the offering of fluids as soon as possible. No delay is tolerated here, and the children respond quite readily to quiet but firm encouragement in this respect.

Some of the children have such short, chubby necks that we have found two other measures add considerably to their comfort. A small towel or padding is placed under the shoulders of these children in the reclining position to allow greatest accommodation of the trachea to the tube. The lock of the tube or the mask will still hit the under surface of the child's chin and cause excoriation. This excoriation has been considerably minimized by simply placing one or two Band-Aids under the chin.

The success, then, of the nursing care we afford our patients with croup centers in readiness and awareness of the staff of all of the contingencies involved. Emphasis is placed on thorough instruction and constant attendance. This constant attendance admittedly can be a tremendous drain on the staffing of a unit if only the student or registered professional nurses are used. Wise selection of the more dependable and interested licensed practical nurses for complete instruction in this particular area will do much to ease the problem.

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*If desired, epinephrine may be used in infiltration anesthesia for [illegible] times.

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Hazards of Viral Infections, Use of Hormone Therapy Subjects of Panel Discussions at ACS Congress

From the 47th annual clinical congress of the American College of Surgeons, held in Chicago October 2-6, TOPICS *presents a report on two panel discussions from the sessions on gynecology and obstetrics.*

Viral Infections in Pregnancy

Knowledge of Infections' Impact Limited, but Immunization Advisable

W. Paul Havens, Jr., M.D., Philadelphia:

There is limited knowledge of the impact of viruses on pregnancy. Reporting is poor, and statistics vary. The severity of disease is related to many factors in the host and in the virus. From what is known at present, it is bold to say that endocrine changes influence the course of disease.

However, the physician should respect viral infections and use good immunizing agents whenever possible. Vaccine for influenza should be given to the pregnant woman in any area in which an outbreak threatens. We are due for a type A epidemic. We cannot be sure it will come, but there are suggestions that influenza is about. In 1957, Asian influenza was pandemic for six months. Over-all, it was a mild disease, but with high morbidity and severity that increased with age. Among those who died from pulmonary and cardiac complications were pregnant women.

Deaths from infections among pregnant women generally occur in the third trimester. In the case of influenza, the secondary bacterial infections, which are less amendable to therapy, hold the greatest dangers.

Poliomyelitis is more severe during pregnancy, and the incidence reported is seven times greater than in non-pregnant women.

Hepatitis in pregnant women has its highest mortality in groups in areas of the world with marked malnutrition. Gamma globulin is effective in modifying hepatitis, but it does not prevent the disease, nor does it affect the incidence of hepatitis without jaundice. Therapeutic abortion is not generally done because the burden of surgery is greater than that of letting the pregnancy continue.

Immunization Needed Because of Greater Predisposition to Infection

John C. Ullery, M.D., Columbus, O.:

Pregnancy taxes physiological reserve and decreases vital capacity. There is greater predisposition to infection and hemorrhage, and it is logical to assume that the effects may be more severe. Consequently, women should be immunized actively and passively against virus diseases before they become pregnant.

Influenza if a serious complication of pregnancy, although it has not been shown to be a cause of fetal abnormality. The treatment is the same as in the non-pregnant patient.

Mumps are dangerous in the pregnant woman because a malformed infant can result, especially if the disease is contracted in the first trimester. If the pregnant woman is exposed, an intradermal test should be done, but she is given only gamma globulin.

Twenty to 40 percent of fetuses are lost among poliomyelitis patients--about one-half of these from abortion. Every woman should receive Salk vaccine. A pregnant woman who has not had the vaccine and is exposed to polio should receive gamma globulin as soon as possible.

There is a 50 percent incidence of serious abnormalities in infants born to women who have rubella in the first four weeks of pregnancy. The decision to allow the pregnancy to continue is a difficult one to make.

Discussion

Q. Is it safe to vaccinate a pregnant woman who has to travel against typhoid, yellow fever and other diseases against which a traveler is usually immunized?

DR. HAVENS: I do not think there is any contraindication to immunization.

DR. JACKSON: One thing to remember is that typhoid vaccine is an endotoxin, and endotoxins have been shown to precipitate labor.

Q. Might any effect on the fetus result from infectious

mononucleosis contracted in the first trimester?
DR. HAVENS: This disease has not been shown to cause fetal abnormality. The patient is managed as the non-pregnant woman.

Q. Are there reactions to influenza vaccine?
DR. JACKSON: Yes; they are related to the potency of the vaccine. The higher the potency the more likely a reaction.

Q. Is one influenza injection as good as two?
DR. JACKSON: Antibodies are strain-specific. As new strains appear, new antibodies must be developed; so the idea is to give broad-spectrum immunization with repeated booster doses.

Q. Is gamma globulin useful in treating hepatitis in the pregnant woman?
DR. HAVENS: It has no therapeutic effect, but is valuable as a prophylactic to modify the course of the disease. Also, the incidence of jaundice diminishes when globulin is given.

Q. What precautions are necessary for the female exposed to mumps with no previous history of the disease?
DR. ULLERY: Some antigen could probably be given which would modify the disease if it did develop.
DR. HAVENS: A skin test should be done to determine whether the patient is immune. If not, convalescent gamma globulin and convalescent plasma are given.

Q. Can exposure of the mother to rubella cause fetal abnormality even if there are no signs of disease?
DR. ULLERY: Yes, because the mother may have a subclinical case.

Q. Should oral as well as injectable polio vaccine be used?
DR. JACKSON: All three types should be given when available.

Therapeutic Abortion Suggested in Some Patients with Rubella in Early Pregnancy

While the practical aspects of the effect of maternal viral infections on offspring cannot be delineated or evaluated at the present time, the conclusion seems justified that the earlier in pregnancy the infection, the greater the risk to the fetus, Ralph Spaeth, M.D., Chicago, said in a panel discussion on the fetal aspects of viral infections in pregnancy.

"The susceptibility of the embryo depends on the stage at which the agent is applied," he said. "Rubella before the fourth week, for instance, carries a great risk of damage to the fetus. Policies for therapeutic abortions may be influenced by this knowledge."

Declaring that there is a distinct relationship between infection in the mother and defect in the child, William B. Goddard, M.D., Iowa City, Ia., told the same session that the difficult question which must be faced is: Is it ever justifiable to perform an abortion for a fetal risk as well as a maternal risk?

"The child may be born normal," he continued, "but there is no way of being sure, and the abnormal child saddles the parents with heartbreak. There is also risk to the mother in the therapeutic abortion. The question of the legality of the procedure can be ignored if consultation is obtained and abortion is done openly for a stated cause in a reputable hospital."

Dr. Goddard advised performing a therapeutic abortion when rubella is a complication if the patient had the rash between the last menstrual period and the twelfth week of pregnancy; when the physician has seen the rash and stated on the chart that it is rubella; and when the parents want abortion.

"The mother must have a reasonable number of children or have a chance of becoming pregnant again," he emphasized. "One attack of rubella seems to impart immunity. Perhaps young women should be encouraged to contract rubella as part of the pre-marital examination.

"A practicing Catholic will not usually request abortion. However, if a Catholic patient states that she wants abortion and understands it is against the church's doctrine, it is suggested that she discuss the matter with her priest."

Hormone Therapy

Hormones May Be Useful In Prevention of Abortion

Robert B. Wilson, M.D., Rochester, Minn.:
In threatened abortions, hormones are valueless. The woman who is cramping, bleeding, who has a fetus which has been dead for some time, will abort; the process is irreversible. But for the *prevention* of abortion, hormone therapy may be useful.

Abnormality of the fetus is not the only reason for abortion. If the sperm or ovum is abnormal, conception is poor and abortion occurs. If one thinks that all abortions are due to genetic factors, he will not use hormone therapy, but if there is a possibility that others might be due to other causes, hormones may be useful. Anyone who discusses this subject is only speculating; there are no real answers.

Some abortions are due to environmental defects. If there is improper or insufficient corpus luteum function, there will be a poor endometrium with a poor implant and poor development. Administration of hormone preparations in this instance can do no harm and may do some good. It is known that there is an abnormal estrogen excretion pattern in the woman who aborts.

A pregnancy test may be done not to confirm the pregnancy but to determine the presence of chorionic gonadotropin in the urine. When the test is negative at one time and positive at another, it is likely that here is poor gonadotropic discharge.

Abnormalities in excretion do occur in the abortion process. What this means is unknown, but with the background of information a pattern of treatment for the woman who aborts repeatedly can be developed. The woman who has difficulty maintaining pregnancy or who has difficulty becoming pregnant is started on therapy early in the pregnancy. Some estrogen and progestin are given exogenously to stimulate progesterone production, if it is thought the patient's own production is insufficient.

Dosage of Premarin, 1.25 mgm., administered three times daily, is increased each week by 1.25 mgm. until

the maximum dose of 2.5 mgm. is given four times daily. Delalutin, 250 mgm., is given intramuscularly at the end of the Premarin course. The patient is advised to have no intercourse, but no other precautions are necessary.

In the suppression of lactation, or more accurately the suppression of engorgement, administration of stilbestrol, 5 mgm., three times daily beginning as soon as possible after delivery and continuing for five days, then twice daily for five days, will avert sore breasts without causing delayed bleeding. The nursing personnel are the best evaluators of the efficiency of this or other therapy.

Hypothyroidism is easy to diagnose, and there is no argument about needing to prescribe thyroid extract. Many advise thyroid extract for the patient who has difficulty becoming pregnant, if there is any indication of decreased function. If the patient has been on thyroid therapy, it is good policy to continue it through the pregnancy.

It should be remembered that every company has a different way of assaying its product. If changing from one brand to another, it may be necessary to change the dose. It is a good idea to use one brand exclusively.

The patient with adrenal insufficiency needs preparation for delivery with 200 mgm. of cortisone intramuscularly 48 hours before an elective delivery, 24 hours before delivery, and on the morning of the section. When there is a spontaneous onset of labor in these patients, 100 mgm. of a fast-acting cortisone substance is given intramuscularly and repeated as needed. If necessary, hydrocortisone hemi-succinate can be given intravenously.

Tells Use of Hormones to Eliminate Ovulation or Aid in Family Planning

Somers H. Sturgis, M.D., Boston:

It is a hopeless task to keep up with new combinations of hormones being produced. Therefore, the physician is well advised to become familiar with one or two good standard preparations and to continue to use these unless there is good indication for change.

Ovulation is the keystone to the arch of normal physiology of the reproductive cycle. Hormones in general are concerned with this cyclic activity of the ovary, and should be given with periodicity to be more normal in effect.

Almost all pituitary substances are from animals and, with the exception of those obtained from primates, are antigenic in man. These are generally obsolete in practice, and two human pituitary products are becoming available. Ovulation has been produced by administering human menopausal urine extract containing FSH in series with human gonadotropin, but it is only valuable in the woman whose pituitary is deficient.

In the field of estrogens, stilbestrol, a USP product which has never been patented, is inexpensive and useful. A good standard is 1-2 mgm. per day for three or four weeks to create physiologic conversion in a woman. In diagnosing amenorrhea, a normal atrophic uterus can be brought about to proliferate and bleed with the standard dose unless it is defective or the passage is blocked. If there is an obstruction, there will be

(Continued on next page)

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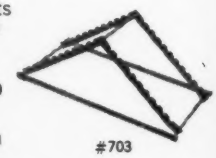

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bleeding above with pain and a mass in the abdomen.

Estrogens are valuable in the differential diagnosis of primary and secondary dysmenorrhea. If the patient is completely relieved by one anovulatory cycle after administration of estrogen, it can be assumed that the disability has a psychogenic background. But, if the pain is not relieved, an organic factor such as endometriosis is suspected.

Stilbestrol can be used for treating dysmenorrhea, but there is danger of making stilbestrol cripples of girls who go on depending on the drug, never realizing there is an emotional component to their cramps. It is usually wise to give the drug for three out of four months.

One-quarter the standard dose of stilbestrol used locally in a vaginal suppository for 10 days to two weeks is effective in treating senile vaginitis.

If the physician is treating a sterility problem and the patient's endometrium is poor at ovulation time, estrogen is given with caution. One-quarter of the standard dose is given from the ninth to the fifteenth day.

In most cases in which progesterone is indicated it is not necessary to create a complete secretory endometrium. Administration of 50 mgm. of progestin in oil one time or of 50 mgm. orally for four days is adequate. In treating anovulatory menses in adolescents, the standard dose of progestin is given periodically and cyclically to induce bleeding in the period of amenorrhea. It is given every five weeks and may develop integrity of the pituitary axis and produce a flow. It should be emphasized that the therapy may be necessary for years before ovulation develops.

There is some place for satisfactory use of androgens. In older women with osteoporosis these are the most effective medications, not for reasons related to remineralization of the skeleton, but for relief of pain. A few hairs may be produced, but small doses of estrogen usually control this undesirable side-effect.

The big problem in hormone therapy is the patient who has her prescription filled month after month and year after year. Patients on hormone therapy must report for complete check-ups to be sure no harm is being done by the administration of these potent substances.

Care of the Diabetic Mother During Pregnancy

Are any precautions necessary for the baby to be born with a mother with Addison's disease and diabetes?

The mother will need additional control with cortisone for the Addison's disease and insulin for the diabetes, said David Y. Hsia, M.D., Chicago, who spoke on "Diabetes and Pre-diabetes in Pregnancy," in the program on endocrine therapy. No precautions are indicated for the infant, other than those which would be taken in the care of any diabetic mother.

Tubal ligation is recommended for the diabetic patient, according to Dr. Hsia, when the mother does not want any more children—usually after the third or fourth pregnancy.

Delivery is induced at the 36th week in diabetics, if the mother and infant are in good condition, because the stillbirth rate rises abruptly at the 37th week, Dr. Hsia said.

Dramamine in Labor, Cesareans, Anomalies, Prematurity Discussed in OB Sessions

The following selected abstracts on obstetrics were taken from papers given at the 1961 convention of the American Medical Association.

IV Dramamine Shortens Labor, Reduces Barbiturate Requirement

Robert S. Scott, M.D., and *Blake H. Watson, M.D.*, St. John's Hospital, Santa Monica, Calif.:

Intravenous administration of dymenhydrinate (Dramamine) is effective in shortening labor and has other beneficial effects for the mother, we have found in our use of the method since February, 1959.

Results with the procedure have been softening of the cervix, shortening of the first and second stages of labor, tranquilization and sedation of the patient, reduced barbiturate requirement, and no significant difference in the rate of complications of labor. There has been no depression of the infant.

After labor has become well established, with regular and forceful uterine contractions, and when the cervix has become dilated to 2 or 3 cms., the patient is given 100 mg. of Dramamine diluted in 18 cc. normal saline, administered in the antecubital vein, slowly, over a period of two minutes.

Since the study began, more than 3,000 cases have been accumulated. However, our report is based on the results obtained in the first 1,000 patients. Half of these were in a non-blind study with controls; the other 500 were in a double-blind study, in which 250 received Dramamine and the other 250 received a placebo which was identical in appearance. The code was in a sealed envelope which was unavailable to those participating in the study until after its completion.

Repeat Cesarean Usually Advisable, Unless Ideal Situation Exists

George W. Morley, M.D., University of Michigan Medical School, Ann Arbor, Mich.:

In evaluating patients who have had previous cesarean sections to decide whether cesareans should be performed again, each patient must be individualized.

If there was a temporary indication for the first cesarean and a low-segment cesarean was performed, if the patient had had a previous labor and the infant is of normal size, and if the physician is in constant attendance with blood readily available and the nursing personnel is alerted with the surgical team on a standby basis—then a trial of labor followed by vaginal delivery cannot be criticized. If any one of the "ifs" cannot be satisfied, the cesarean section should be repeated.

Ideally, if all the criteria mentioned above could be fulfilled, then each case could be individualized. Since this cannot be accomplished in more than 85 percent of the hospitals in the country caring for obstetrical patients today, the widsom, safety, and advisability of changing the philosophy toward repeat elective cesarean section seems questionable.

In a review of 215 consecutive cases of repeat cesarean section the corrected fetal mortality of .9 percent and the corrected prematurity rate of .4 percent compares favorably with statistics presented by proponents of subsequent vaginal delivery following primary cesarean section. In addition, since arbitrary limitation of the number of cesarean sections per patient no longer seem justified, it is recommended that repeat elective cesarean section be considered the treatment of choice for these patients.

Some Congenital Anomalies Cannot Be Recognized in Child's First Year

Frank R. Lock, M.D., and *H. Bee Galting, M.D.*, department of obstetrics and gynecology, Wake Forest College of the Bowman Gray School of Medicine, Winston-Salem, N.C., and *H. Bradley Wells, Ph.D.*, department of biostatistics, School of Public Health, University of North Carolina, Chapel Hill:

Certain congenital anomalies cannot be recognized in the early months of life, we found during a study to determine the frequency of anomalies resulting from rubella infection or exposure during pregnancy.

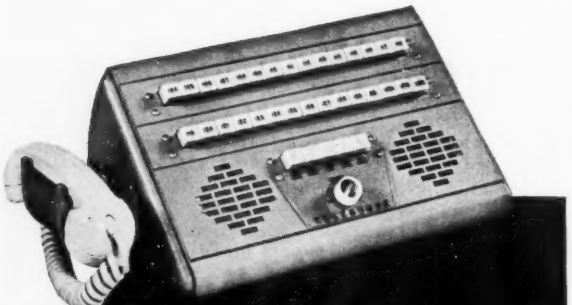
We also found that a final evaluation of all systems could not be made in infancy. Some conditions which were initially believed to be anomalies later proved to be normal.

In the study, 176 children were examined twice for evidence of congenital anomalies as a result of maternal rubella, and 231 siblings of these children were examined to provide a comparison group. Ages of the children at their first examination ranged from 4 to 12 months; at the second examination, they were 16 to 25 months old.

At the first examination, 35 infants were found to have 32 definite individual anomalies and 25 questionable anomalies. Thirteen anomalies were found in siblings. The major areas of doubt after the initial examination were in the evaluation of cardiac murmurs and auditory status.

At the second examination, only seven of the 25 doubtful anomalies were proved to exist; 18 were disproved or remain doubtful. However, 11 previously unsuspected individual anomalies were found. All but one were of a serious nature. The 11 included four cases of severe mental retardation.

In the final evaluation, there were 19 children with



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41 individual anomalies. Of the 41, 26.8 percent were unrecognized up to the age of 1 year, and 17.1 percent were suspected but not proved until the age of 2 years. In other words, the total of unrecognized anomalies in infancy was 43.9 precent.

Anomalies resulting from rubella are usually serious and multiple, involving more than one major system. The rate of anomalies apparently declines inversely with the duration of gestation at the time the rubella infection occurs. No abnormalities were found when the infection occurred after the fourteenth week of gestation, and no typical abnormalities were found in patients who were exposed but did not develop clinical manifestations of the disease.

The difficulty in detecting mental retardation early in life poses a problem to the physician faced with advising real or adoptive parents concerning mental normality. Dogmatic statements about the normal mental status of an infant are to be condemned. Adoptive parents must accept all possibilities for the future outcome of a child before adoption is completed. This is particularly important when family and pregnancy histories are lacking.

The physician should refrain from making a diagnosis of congenital heart disease in infancy on the basis of a murmur alone. Sometimes differentiation between a functional and an organic murmur is impossible.

The presence of normal speech development may disguise an underlying partial hearing loss. Eye defects also may be difficult to detect. Two cases of retinal degeneration were unsuspected on the basis of the initial examination.

Report Results with Relaxant In Averting Premature Birth

Edward H. Bishop, M.D., and *Theodore B. Woutersz, M.D.,* University of Pennsylvania School of Medicine, Philadelphia:

Premature births were averted in 66 (43 percent) of 156 patients by the administration of isoxsuprine, a myometrial relaxant.

In 21 percent of the patients, premature labor was delayed for one week or longer, but their babies still weighed under 2,500 Gms. at birth. The drug produced only a brief cessation of labor in 11 percent of the patients and no effect in 25 percent.

The initial dosage of the drug consisted of 30 mg. diluted in 200 cc. of 5% glucose in water, and was administered intravenously at the rate of 40-50 drops per minute. After completion of this intravenous infusion, 10 mg. of isoxsuprine was administered intramuscularly every three hours. After the first 24 hours of therapy, medication was administered either intramuscularly or orally, depending upon uterine activity. Once uterine contractions had ceased for 48 hours, the patient was usually discharged from the hospital, and a maintenance dose of 10 mg. four times a day orally was continued for at least two weeks.

Maternal hypotension, which occurred in three cases, was the only complication experienced during administration of this drug. In all instances blood pressure promptly returned to normal following a decrease in the rate of administration. We were unable to demonstrate any deleterious effect upon the infant.

(Continued from page 9)

the cell machinery. Each of these substances was tagged with carbon, a radioisotope tracer.

Shortly after injection each mouse was placed in a metabolic measuring chamber, and all of the radioactive carbon dioxide (C1402) exhaled by the mouse was measured. From these measurements, the scientists computed whether the C14-labelled body fuels were being burned within the mouse's cells via a normal method, or via a primitive method requiring less oxygen, which the cell switches to when it experiences oxygen deprivation.

When injections were given to tumor-bearing mice, a drop of about 30 percent in cellular fuel-burning via the normal way was noted. At the same time, fuel-burning via the alternate primitive route increased up to 50 percent. In a test made with pre-cancerous mice, it was found that they had already embarked on their fatal metabolic course. Even though there were no visible signs of cancer on the bodies of the mice, the tests in the metabolic chamber told the story of a change in the fuel-burning pattern.

Rare Basophil Sparks Allergic Reaction

Discovery of the role played by an obscure blood cell in a variety of body processes has been reported by a research team at the University of Pennsylvania.

The cell, called a basophil because of its affinity for basic dyes, is the rarest and most elusive of all the blood cells. For every basophil, there are 300,000 red cells in the blood stream.

New technics developed by Drs. Lennart Juhlin and Walter B. Shelley show the basophil to be intimately concerned with several vital processes, including blood coagulation, transport of fats in the blood stream, allergic reactions, and possibly the dissolution of blood clots.

The basophil is a small white blood cell consisting partly of granules containing histamine and heparin. Heparin is a blood anticoagulant. Histamine is an amine that dilates blood vessels and thus lowers blood pressure. It also stimulates the flow of gastric juice, and probably has an important function in allergic reactions.

Allergic reaction to cold was studied by the researchers. Some persons respond to cold with more than just a shiver. They get flushed, parts of their bodies swell, they develop rashes or hive-like lumps. If they drink ice water they have trouble swallowing. Two such cold-allergic persons were used in tests. Both developed wheals on the skin when touched with an ice cube, then warmed with an infra-red lamp.

Microscopic comparison of their treated skin with that of normal persons revealed a striking difference. In the cold-sensitive persons, a great many more of the mast cells —close relatives to basophils—were depleted of the granules they nor-

(Continued on page 90)

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Cardiac Surgery in a 224-Bed Community Hospital

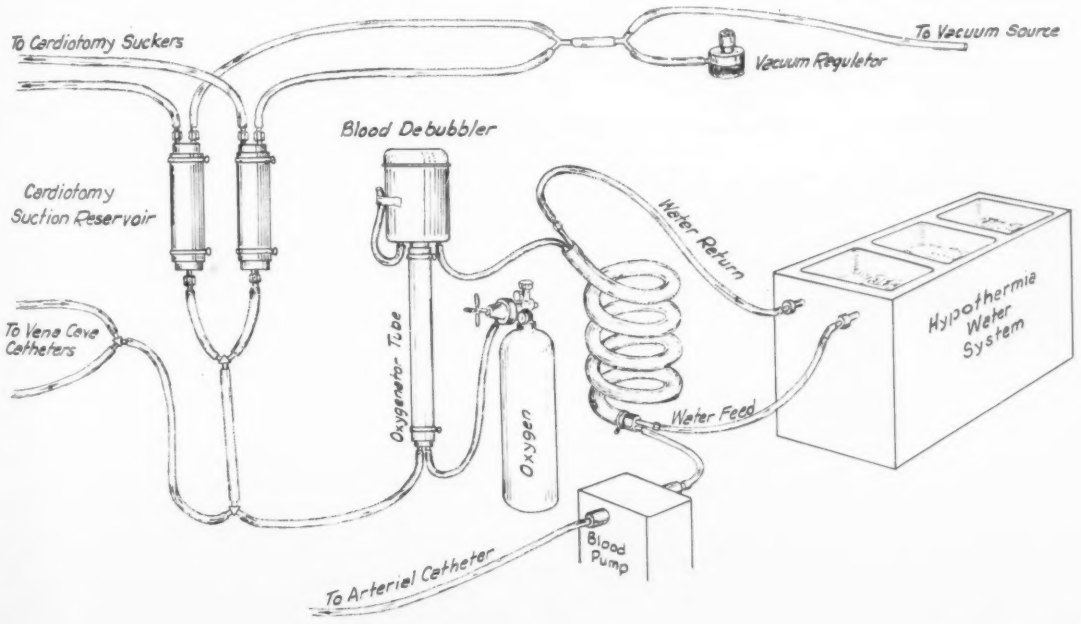
By Sister Mary Alvera Simon, R.S.M.; Ramona Pike, R.N.; Mary Spencer, R.N.; Ivan Thiessen, Bobby Singleton, and Modine Pierce*

The system and technic as evolved by Zuhdi, Carey and Greer [1, 2] (Diagram 1) have rendered open-heart surgery within the realm of any community hospital that deals with major surgery.

Mercy Hospital in Oklahoma City is a 222-bed privately owned nonprofit general hospital, which has been doing open-heart surgery since January, 1959, following numerous experimental procedures on animals in its Heart and Research Institute.[1] This type of surgery is scheduled in our institution as any other type of operative procedure, and the prepara-

*Sister Mary Alvera is operating-room supervisor, Mercy Hospital, Oklahoma City, Okla., and Miss Pike and Miss Spencer are on the operating-room nursing staff. Mr. Thiessen is a surgical technician; Mr. Singleton, a laboratory assistant; and Miss Pierce, a research assistant.

Diagram 1. (Below) The system as evolved and used at Mercy Hospital, Oklahoma City, Okla.



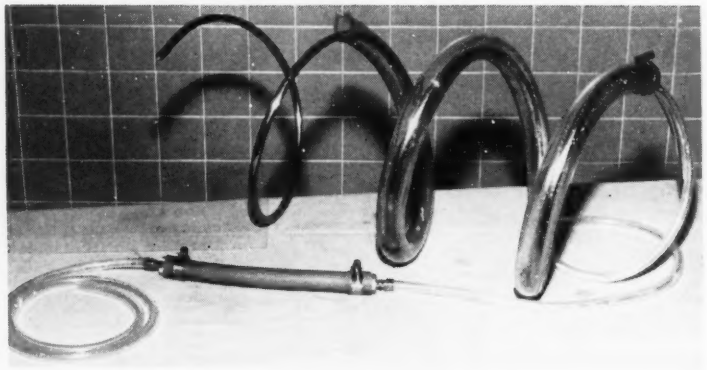


Photo 1. Double helical reservoir and arterial limb of heart-lung machine.

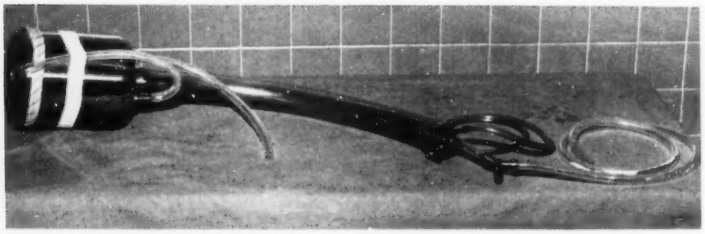


Photo 2. Oxygenator and cannister debubbler.

tion needed does not exceed that for cholecystectomy, for instance.

The authors prepared this article in the belief that others who are doing or are planning to do open-heart surgery may benefit from the nurses' experience and from learning their method of preparing for this type of operation.

I. Preparation of the Heart-Lung Machine

For the cardiopulmonary bypass, we use a modified DeWall-Lillehei heart-lung machine, with a volume-decreasing heat-exchanger[2, 3, 4]. This heat exchange is accomplished by means of a stainless steel coil which is inserted into and extends beyond both ends of the mayon helix and through which warm or cold water is countercurrently circulated[5**].

**A Kimray triple-temperature water circulating system is used.

Photo 3. Cardiotomy suction.

A. The Mayon Tubing

All tubing is washed carefully in a solution of green soap and water, and thoroughly rinsed for five minutes by running water under pressure through each piece (see lists in Figs. 1 and 2). The long tubing is wound into a loose coil without overlap or kink, and the loose ends are secured with autoclave tape. The tubing is examined for areas of weakness or apparent defects.

The tubing is placed in a double wrapper and autoclaved, without placing anything heavy on it, for 30 minutes at 250° F., under 20 pounds of pressure. To insure transparency, autoclaving should be done seven to 10 days prior to surgery. An alternate technic to insure transparency consists of drying the tubing for two hours, opening the door, and leaving the tubing in the autoclave until it is cool. Opacity of the tubing renders difficult the visualization of air bubbles and degree of oxygenation.

B. The Double Helix (photograph 1)

The double helix serves as a reservoir, bubble separator and heat-exchanger[6], and is assembled by threading the metal coil inside the mayon tubing after moistening both. The open ends of the tubing are covered with gauze sponges and secured with autoclave tape. The entire helix is wrapped and autoclaved as above.

C. The Oxygenator (photograph 2)

The oxygenator consists of these pieces:

1. A 25" piece of 1½" mayon tubing for mixing the oxygen and blood when the large cannister is used and a 1" tubing for the smaller one.
2. An oxygen bubbler fitting

3. A 52" piece of ¼" tubing to the oxygen source.

D. The Debubbler (photographs 1 and 2)

1. The cannister, a three-quart stainless steel dressing can with three openings in the bottom, is used for patients weighing more than 50 kg. and a two-quart can for patients weighing less than 50 kg.
2. A nylon filter.†
3. Two 12" pieces of ⅜" tubing, one for the outflow into the helix and one for level detection.
6. Two steel mesh sponges.

The cannister is assembled before the day of surgery. The can and all its parts are cleaned with ether to remove the silicone, washed with green soap and 1% solution of sodium hydroxide, and rinsed with running water. The inside of the can and all its parts are sprayed with a thin film of silicone; the filter is slipped in place over the central post, followed by a disc, two steel mesh sponges, and another disc. Then the filter is drawn together at the top. The lid of the cannister is then taped in place, wrapped, and autoclaved.

†Phelan Manufacturing Co., Minneapolis, Minn.

E. Connectors, Stoppers and Hosebands (Figs. 3,4)

These are washed in green soap and water, followed by a solution of 1% sodium hydroxide, and rinsed thoroughly. In washing the connectors, care must be taken that the inner surfaces are not scratched or damaged. Only a soft cloth should be used—not a brush.

F. Packs

1. A pack is prepared for the nurse assembling the machine (Fig. 5).
2. Two linen packs are prepared for the scrub nurse (Figs. 6 and 7).

G. Immediate Preparation of the Machine

About 30 minutes prior to surgery, the heart-lung machine is assembled in the following order:

1. The helix
2. The arterial line
3. The oxygenator tube and the cannister

Figures 1-9

Fig. 1. Tubing for a patient weighing more than 50 kg.

No. of pieces	*Type*	*Size*	*Length*	*Purpose*
7	Mayon	⅜" I.D.	52"	To carry blood
1	"	¼" I.D.	52"	For oxygen
2	"	2½" I.D.	8"	Cardiotomy suction
1	"	1½" I.D.	24"	Oxygen mixing tube
1	"	1¼" I.D.	82"	Helix
1	Latex rubber	¾" I.D.	12"	Pump head

Fig. 2. Tubing for a patient weighing less than 50 kg.

No. of pieces	*Type*	*Size*	*Length*	*Purpose*
4	Mayon	⅜" I.D.	52"	To carry blood
3	"	¼" I.D.	52"	To carry blood
1	"	2½" I.D.	8"	Cardiotomy suction
1	"	1" I.D.	24"	Oxygen mixing
1	"	1" I.D.	82"	Helix
1	Latex rubber	½" I.D.	12"	Pump head

Fig. 3. Stainless steel connectors

2⅜" x ¾" connectors (2¼" x ½" for child)
4⅜" x ⅜" straight connectors
2⅜" x ¼" straight connectors
3⅜" x ⅜" straight connectors
3⅜" x ⅜" x ⅜" Y-connectors (2⅜" x ¼" x ¼" for child)

Fig. 4. Stoppers

2 3" with one ⅜" tube entrance
2 3" with one ⅜" and one ¼" tube entrance
1 1" with one ⅜" and one ¼" tube entrance
1 1¼" with one ⅜" and one ¼" tube entrance

Fig. 5. Pack for assembling the heart-lung machine

Large splash basin
Towels (5)
Mayo table drape
Screwdriver
Rubber bands (24)
Connectors (required sizes and number)
Hosebands (required number)
Gown
Glove powder

Fig. 6. Linen pack #1

Gowns (5)
Towels (24)

Fig. 7. Linen pack #2

Combination instrument table and patient drape
Second cover for instrument table. Suture is placed under this drape
Radiopaque sponges, 4x4's (12)
Abdominal packs (24)

Fig. 8. Pack of small items

50-cc. syringes (2)
An assortment of different sizes of syringes
Medicine glasses (3)
Umbilical tape, 24" lengths (6)
Catheter, 14 French (cut in two 6" lengths)
Suture needles (assorted)
Peanut dissectors (2)
Stockinette 2" wide for retractor boots
Suction tubing, 36" lengths (2)
Stainless steel wire (20-24-26)

Fig. 9. Necessary equipment in the operating room

Instrument table
Intravenous poles (3)
Portable suction machine
Wall suction units (2)
Scales for weighing sponges
Cardioscope or electronics for medicine
Defibrillator and electrodes
Portable spotlight
Special drugs
Venesection tray

Photo 4. Double-deck table for surgery.

4. The cardiotomy suction reservoir[7] (photograph 3)
5. The vacuum regulator to the reservoir and to the vacuum source[7]
6. The stainless steel coil to the heat source
7. The oxygenator to the oxygen source.

After the helix and arterial line are ready, these are given to the nurse's assistant, who fills the helix with warm saline, and checks the helix and arterial line carefully to see that all air bubbles are eliminated. The latex tubing of the arterial line is now placed in the sigmamotor pump head, and the pump is checked to make sure it is properly occlusive. The arterial flow rate is calibrated at 20 cc. per minute per kilogram of body weight, using a graduated beaker.

After calibration, the helix is emptied of saline to within approximately four inches of the bottom stopper and filled with the desired amount of 5% dextrose in water. The remaining saline used for priming is removed from the system by pumping it out and replacing it with 5% dextrose in water. The priming volume is calculated using the formula, kilogram weight X 16 cc.[2] The machine is now ready for use.

"That new intern is determined to finish his rounds on time."

II. Preparation of the Operating Room, Linen and Other Supplies

The preparation of the operating room and the supplies and equipment to be used are the responsibility of both the circulating nurse and the scrub nurse. The scrub nurse prepares a special pack prior to surgery that contains all the necessary small items (Fig. 8). These are placed in a basin to be sterilized. This conserves time in "setting up."

A combination drape, 11′ x 6′, drapes both patient and instrument table. This drape has a horizontal opening for the chest incision and a vertical opening for the femoral cannulation. The femoral opening has a flap that may be used to cover the femoral incision if desired. The compact instrument table[8] (see photograph 4) is used in all open-heart surgery procedures. Prior to surgery, the operating room must be checked for all necessary equipment (Fig. 9).

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Formation of Eye-Bank Federation Announced at AAOO Convention

Formation of the Eye-Bank Association of America—a federation of eye banks in all sections of the United States—was announced at the 66th annual meeting of the American Academy of Ophthalmology and Otolaryngology, held in Chicago October 8-13.

Thirty-five eye banks were accepted as charter members of the federation. Named president of the new organization was Ross Guglielmino, president of Associated Eye Banks, Rochester, N. Y. President-elect is L. Byron Holt, M.D., North Carolina Eye Bank, Winston-Salem, N. C.

Purposes of the federation are to coordinate the activities of eye banks, to stimulate the donation of eyes, to establish national legislation on eye donations, and to encourage and finance research in the prevention and treatment of blinding eye diseases.

The announcement of the group's formation stressed the importance of educating the public to make eye donations to local banks, rather than making such donations in wills. If a donation is made in a will, the donor's wish probably will not be known until too late to make use of the eyes, which must be removed within six hours after death if they are to be used for transplanting.

New president of the AAOO is Lawrence R. Boies, M.D., Minneapolis, who succeeded Dohrmann K. Pischel, M.D., San Francisco. Albert D. Ruedemann, M.D., president and director, Kresge Eye Institute, Detroit, was named president-elect.

Following are highlights of selected papers.

Aid for Diagnosing Eye Ailments

The "sniperscope," an electronic instrument used in World War II to make enemy soldiers visible at night to American sharpshooters, is being adapted for diagnosis of deep-seated eye abnormalities, according to an exhibit presented by the Office of Naval Research.

The apparatus employs infrared rays which are capable of passing through corneas which have been made opaque by injury or disease. It provides continuous direct observation of eye structures back of the cornea, thus permitting surveillance of changes that occur during the administration of drugs or during minor surgical procedures. It also frequently discloses long-standing afflictions such as tumors of the eye or atrophy of the iris, which may have arisen after the surface opacity developed.

The device may help physicians decide whether corneal transplant surgery is advisable. If it detects abnormalities in the deeper eye tissue, physicians may conclude that these defects lessen the possibility for sight restoration.

Sterilization of Tonometers

A thorough study of the technics for sterilizing tonometers—including an evaluation of the effectiveness, simplicity, durability, time consumption, cost, and damage to the tonometers by the technics—showed that no method previously described satisfactorily met all of these requirements, said Ronald M. Wood, Ph.D., Baltimore.

A thin, sterile, disposable membrane was developed to enclose the footplate, plunger, and barrel of the tonometer. Laboratory and clinical findings show that the membrane does not alter tonometer accuracy, Dr. Wood said. It acts as a physical barrier between the tonometer and the eye to prevent infection.

Toxicity from Local Anesthetics

Local anesthetics should not be given routinely, because although they are ordinarily harmless, they can cause a reaction, even a heart-stoppage, in some persons, according to John S. Lundy, M.D., VA Research Hospital, Chicago.

Before giving a local anesthetic, Dr. Lundy pointed out, the physician should take a history of the patient's sensitivities, especially from prior experiences, and should examine him for the condition of mind and body. Among the factors to be considered is the patient's disposition. Preoperative preparation should include mental preparation—the use of suggestion and assurance; medication, for mood and prophylaxis against untoward effects of the local anesthetic; and measures to lower fever, if it is present. There should be support for special postures and procedures: mechanical support, vasopressure, blood loss, and devices to aid body comfort, such as air conditioning and electric fans.

Redheads, Dr. Lundy noted, are more sensitive to pain than blondes or brunettes.

Tympanoplasty

Since the advent of the various tympanoplasty procedures, perhaps too much emphasis has been placed upon the improvement of hearing with these procedures rather than on the control of the disease, Woodrow D. Schlosser, M.D., Philadelphia, declared

in a symposium on tympanoplasty. The aims of tympanoplastic surgery, he emphasized, must be the same as those of the older mastoid procedures: to control the disease first and then to seek to improve the hearing sensitivity.

It now is held, he said, that extensive mastoid surgery involving various skin-grafting procedures combined with muscle-graft implants to obliterate the mastoid bowl gives promise of providing the best single answer to the twofold purpose of tympanoplasty.

Contraindications to tympanoplasty, according to Seymour J. Brockman, M.D., Los Angeles, are: diffuse cholesteatosis—primarily pediatric, occasionally adult; tympanosclerosis—osteoclastic form; fixed stapes; atrophic mucosa of the middle ear; local manifestation of systemic illness, such as tuberculosis; nonfunctioning or poor-functioning eustachian tube; acute infection of temporal bone; persistent upper-respiratory manifestations, such as allergy, sinusitis, endocrinopathy, infections, and septal deviations; significant sensorineural defects; and nonfunctioning round window.

Effect of Vasodilator Drugs

Many ophthalmologists administer drugs that are peripheral vasodilators in an attempt to increase the volume of blood in the eye, but actually effective peripheral dilators diminish the intraocular blood volume, said Irving J. Leopold, M.D., Philadelphia, who for several years has been studying effects of these drugs in experimental animals. Certain peripheral vasodilators—for example, nicotinic acid—produced little or no effect, he found.

Effective vasoconstrictors, such as epinephrine and levarterenol, caused a marked increase in the intraocular blood volume.

Dr. Leopold suggested that the use of peripheral vasodilators is contraindicated for intraocular conditions that seem to be associated with diminished blood supply.

Granuloma After Scleral Buckling

A series of cases of chronic granuloma of the eye which followed encircling scleral buckling operations for retinal detachment was described by William G. Everett, M.D., Dorothy C. Scott, M.D., and Margaret C. Sharrer, M.D., of Pittsburgh. The granulomas were observed following the use of polyethylene tubing and silicone rubber tubing with intraluminal silk sutures.

Granulomas of this type appear at the open ends of the tube, the speakers said, at any time from a few weeks to many months after surgery. In one case in which an encircling solid silicone rod was used with two polyethylene cuffs and no intraluminal suture, typical granulomas developed at the ends of the polyethylene cuffs.

Granulomas have not been observed in segmental scleral buckling operations when only a section of tubing of either polyethylene or silicone was buried in the sclera.

These lesions have uniformly failed to respond to topical or systemic treatment. Removal of the tube and suture, or of the silk suture alone, will relieve the granulomas.

Experiments in dogs showed that polyethylene and silicone tubes without intraluminal sutures and solid silicone rods did not produce granulomas. The results of these studies led to the development of a new solid silicone rod with an incorporated Mersiline suture for scleral buckling in retinal detachment surgery. Clinical use of this material for one and one-half years has resulted in no granulomas.

The following abstract was taken from a talk given at the recent congress of the International Anesthesia Research Society.

Massive Transfusions During Surgery Risky; Early Reactions Masked

J. J. Jacoby, M.D., professor and chairman, department of anesthesiology, Marquette University, Milwaukee:

There are certainly times when the single-unit transfusion is both worthwhile and necessary. On the other hand, injudicious use of such transfusions is frowned upon. The astute clinician must decide when the single unit is worthwhile. If we say that patients with hemoglobin levels below 10 shall receive a transfusion, what about the patient whose blood sample returns from the laboratory marked 9.8? Subsequent testing of the same patient's blood may give a reading of 12.5. So our evaluations are based upon laboratory determinations which are valueless.

The patient who does need a transfusion is the one with hypovolemia and anemia. This transfusion should be done before anesthesia is given. If it is given after induction, the risk is considerably greater. Anesthetic agents interfere with the myocardium and its ability to contract. Early signs of transfusion reaction are lost.

Risks of massive transfusion during operation are more than the total of risks inherent in each individual bottle given. Each unit of blood given in such a transfusion must not only be compatible with that of the patient, but also with the blood of all the other donors as well.

Many risks in massive transfusions are really personnel problems. The patient's sudden loss of blood results in a crisis situation and a certain amount of rush. It is essential that this crisis situation be anticipated and trained for, so that crisis becomes routine.

Blood-bank blood is acidotic. Transfusions may trigger metabolic acidosis and poor perfusion. The body has a great reservoir, and added potassium content in bank blood rarely causes a significant rise in the patient's potassium level.

Internists who watch us in the operating room give a patient what seems like a tremendous amount of blood in a short time are concerned with overtransfusing. Actually all we do is endeavor to keep up with the blood loss. When blood must be pumped, a compressed air pump is dangerous, but most effective.

Panel Discussion on Meningomyelocele Sparks Interest at ACS Meeting

Only 2,000 of 10,000 Victims Born Each Year Get Attention

The vast majority of patients with meningomyelocele still go untreated. It is estimated that 10,000 babies are born every year with meningomyelocele. Approximately 2,000 receive treatment. At the Children's Hospital in Philadelphia, the operative schedule shows an average of two per week.

In 1951, one could expect that 95 of 100 patients with meningomyelocele would be dead within five years, and 70 percent within three years—all because of calculated neglect. A decade ago, it was assumed that a child would be permanently crippled; that anomalies of the urinary tract were beyond correction; that bladder dysfunction was inevitable; that hydrocephalus was untreatable. Study and research have changed this picture radically. Early death is rare, and 85 percent of youngsters become ambulatory. *Eugene Spitz, M.D.*, associate professor of pediatric neurosurgery, University of Pennsylvania School of Medicine, Philadelphia.

Fecal Contamination, Skin Irritation Among Problems Nurse Guards Against

The child with meningomyelocele is isolated on admission, and a clean technic is used for all treatments. The Isolette is useful, but the warm, humid atmosphere encourages infection already present. When in use and after use, the Isolette must be cleaned scrupulously. The infant is not dressed and bedclothing is omitted. A lamp is used for warmth if necessary.

A plastic apron is sealed over the buttocks below the sac to prevent fecal contamination. If the sac is in the low lumbar region, the apron may have to be sealed over the gluteal fold. Diapers are fitted under the apron, never up over the back. Buttocks, perineum, and apron are kept clean. Postoperatively, the same technic is used.

The thin sac is protected with non-adhering dressings. A constant drip of a solution of debriding agent keeps the dressing wet. The dressing is changed at least every three hours. Irritation from solution contacting skin around the sac must be prevented, and leakage of spinal fluid must be reported immediately.

The infant can be positioned in only a few ways because of the sac, and skin irritation is a serious problem. A minimal use of cream and lotions and frequent changes of linen help to avert the trouble. Sponge-rubber padding distributes pressure points more evenly.

Preoperatively, the infant is fed in bed unless the sac is covered. Postoperatively, he can be held for feeding unless there are wound complications. He is never on his back until the wound is healed. Careful positioning under the direction of the orthopedic surgeon helps to prevent flexion and contracture deformities. Legs and hips are put through as wide a range of position as possible, but always with care to avoid excessive strain.

Mothers are urged to visit as often as possible and to learn to hold, feed and treat the infant. If there is any hesitation in the mother, she should assume some of the infant's care, under the supervision of the nurse, while he is still in the hospital. She should be reminded that the child must be raised in as normal a pattern as possible. Social-service and public-health resources help with problems related to discharge and home care.—*Eloise Auer, R.N.*, neurosurgical nurse, Children's Hospital, Philadelphia.

Management of Urological Problems: Patients Fall into Two Groups

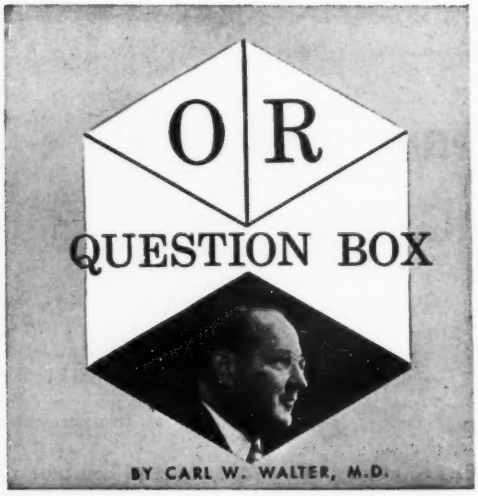
Patients with meningomyelocele can be divided into two general groups with regard to their urological problems. In children in the first group, the bladder does not act as a reservoir, and urine dribbles out as it is formed by the kidneys. There is never any residual and no problem of infection. After age 5, however, the child is a social problem because of the odor and embarrassment of leakage.

In children in the second group, the bladder is constantly full. Urine dribbles over when capacity is reached, but the bladder is never emptied. There is always a residual, and bacteremia is inevitable. The situation does not become acute before age 1 or 2. After 2, the infection is chronic.

For the child in the first group, nothing is done until he is 4 or 5 years old. Then effort is made to keep him dry, so that he can go to school. The bladder is made to act as a reservoir by compressing the urethra. This is easily done in males with a tight perineal strap that compresses the penis against the symphysis pubis so that leakage cannot occur. In a fat boy, the technic is less effective.

The mother is taught to empty the bladder every two to three hours, by easing the penis out of the

(Continued on page 85)



Assisted by Dorothy W. Errera, R. N.

Q. One of our operating-room staff nurses lives with a brother recently diagnosed as having viral hepatitis. Should this nurse be permitted to continue to work in the operating room? Some physicians here believe that she should be detached from the operating room for six weeks but should be allowed to work elsewhere in the hospital.

A. The several kinds of viral hepatitis are spread in two distinctly different ways. The homologous serum juandice variety is spread only by introducing blood, tissue fluid or pus from an infected patient to the victim. Infectious hepatitis is spread by the feces-urine route. Neither of these modes of spread pertains particularly to a nurse working in the operating room, where contact with patients is more ideally hygienic than anywhere else in the hospital.

If the doctors are in doubt concerning the diagnosis of infectious hepatitis to the point that they would permit your nurse to work elsewhere in the hospital, I do not believe there is any indication for removing her from work in the operating room.

Q. How do you suggest positioning a shallow lid for sterilization in an autoclave? We hesitate to sterilize it with the inside uppermost because of the possibility of trapping air; if it is placed with the inside surface down, will steam contact the inner surface?

A. There is no problem of air clearance in a shallow or flat lid; hence it can be sterilized in whatever position allows for safe and convenient removal from the sterilizer. It can be sterilized face downward on the perforated sterilizer carriage or atop a load of dry goods. Unless it is weighted down to a point where a tight seal is effected, there is no interference with the circulation of steam.

The lid can be sterilized face up. If there is any question of trapped air, a few drops of water left on the inner surface will assure the presence of microbicidal steam.

In addition, these lids can be sterilized upright wedged between other supplies. They should be arranged to be within easy reach when the sterilizer carriage is unloaded so that they can be grasped without contamination.

Dr. Walter is always glad to answer readers' problems. You can write to him % Hospital Topics, 30 W. Washington, Chicago.

Q. Our housekeeping department recently purchased an automatic floor-scrubber which is used to clean the corridors throughout the hospital. The machine meters out a hexachlorophene solution, scrubs the floor, and sucks the fluid up into the vacuum. The housekeeping department would like to use the same machine in the operating room and delivery suite. Do you think this suggestion is acceptable?

A. Hexachlorophene agents are not necessarily the best choice for floor disinfection. The synthetic phenolics and quaternary ammonium compounds offer a wider range of bactericidal action to cope with the broad spectrum of bacteria common to floors.

The floor-scrubbing machine can be used throughout the hospital. Transient dirt picked up during the course of travel can be removed from the castors by running the machine through a puddle of germicidal solution. The brushes are cleaned and disinfected in the course of actual use.

Q. Is a sponge count necessary during abdominal surgery if all the sponges are removed from the field before the abdomen is opened and thereafter sponges are clamped to a forceps?

A. Sponge counts are usually a matter of policy involving the surgeon, the operating-room staff, and hospital administration. An alert scrub nurse can easily control the traffic in sponges on the field, but success depends on a mature working environment in which there is mutual respect.

On the other hand, if the environment is one in which recriminations are common, a sponge count is necessary to allow everyone to remain detached and free of total responsibility.

Q. What is the recommended time for sterilization of hand pieces and drill points in an oil sterilizer maintained at 250° F.?

A. Oil sterilizers are more often maintained at 320° F., and the exposure time for destruction of dry spores at this temperature with this method is one hour. In an oil sterilizer at 250° F., dry spores are destroyed after six hours of exposure.

Equipment such as you describe can be sterilized by exposure to dry heat at 320° F. for one hour or 250° F. for six hours. In the first instance, the conventional dry-heat oven is used; in the latter, an ordinary jacketed steam sterilizer can be used. The instruments, unwrapped or packaged in aluminum foil to avert the interference or delay in heating which would result with a textile wrapper, are placed in the chamber. The sterilizer door is closed and steam is admitted to the jacket ONLY. The hot jacket ultimately heats the chamber and its contents by radiation. Overnight exposure is a convenient meth-

od for utilizing this technic to avoid inconvenience during busy daytime hours.

Stainless steel drill points can also be sterilized in saturated steam at 250° F. for 30 minutes if they are protected from contact with other instruments in the sterilizer.

Cutting edges can be sterilized in the steam sterilizer with minimal corrosion by submerging them in diethylene glycol containing 10 to 20 percent water. The instruments are arranged in shallow trays and exposed to saturated steam at 250° F. for 30 minutes.

Use of the new Vapor-Phase corrosion inhibitors also makes steam sterilization without corrosion practical.

Q. Do electric hand dryers stir up unnecessary dust and interfere with the ventilating system? Doesn't the hot air contaminate the skin after it has been scrubbed?

A. Electric hand dryers are mounted five feet above the floor with the nozzle directed towards the ceiling. The hot air that issues from such a dryer is sterile. Bacteriologic studies are published in *Public Health Reports*, March, 1953, in the article, "Mechanical Air Drying of Hands Following Preoperative Scrubbing," by Dr. Paul E. Walker.

Q. Our hospital engineer objects to changing his clothes when he comes into the operating suite for a repair which does not involve his entering an operating room. We struggle to convince him that this is really a necessity and not just a whim of the nursing staff.

A. His clothing is almost certain to become heavily seeded with clostridia as he goes from plumbing repairs to chores in the garden and grounds. Show him the way air currents or changes in ventilation can carry the bacteria in lint and dust shed from his clothing in the corridor into the operating room where a radical mastectomy or mid-thigh amputation is being done. The vapor trail from a titanium bomb or a piece of dry ice dropped in a glass of warm water is usually convincing evidence that air is a wonderful vehicle for transporting bacteria.

P I B Skeerbeek

MENINGOMYELOCELE

(Continued from page 83)

strap and letting the urine run out. By the time the patient is 6 or 7, he can do this for himself.

The problem is even simpler with girls, although social and emotional ramifications are greater. At about 4 or 5 years, the leakage is controlled by inserting a tampon into the vagina with the end protruding. This compresses the urethra against the symphysis. Every two or three hours, the tampon is pushed back while the bladder empties, then pulled back into position.

The disadvantage of this technic is that with repeated insertion, the hymen is eroded after six months. Considering the medicolegal problems, the hospital insists that both parents sign a permit for the technic, and the permit is attached to the patient's record.

The extent of the emotional problem becomes obvious when one considers that only five percent of mothers will allow the technic before the child is of school age. By the time the child is 10 or 12, she forces the parents to agree.

In the second group, in whom the bladder never contracts and so never empties, the mother and ultimately the child are trained to empty the bladder by force.

The child lies on a table at the height of the mother's knees. A fenestrated foam-rubber pad protects the meningomyelocele from pressure. Using the clenched fist with the back of the hand and the wrist stiff, the mother leans on the child's abdomen beneath the umbilicus and the skin ring above the symphysis pubis. As the child breathes, she pushes in one-half or three-quarters of an inch. The fists are held in place as the child expires, and with the next breath she advances another one-half inch. When the pulsation of the aorta is felt, the fists are directed obliquely back at a 45° angle so that the knuckles are over the symphysis and the bladder empties. A great deal of body weight is needed.

An intelligent mother can learn the technic in three months, and urinary infection usually disappears in six months to a year. The child may never leak urine and may be socially acceptable at all times. By age 8 or 9, he is usually fairly well matured emotionally and is able to understand and perform the maneuver himself.

This maneuver also solves some of the fecal problem, because the child will defecate at the same time he empties his bladder. In the first group of patients, fecal leakage is handled much the same as a colostomy, with an enema given at the same time every day.

Sulfonamides are administered anywhere from five to 15 years to prevent the major deformities that complicate infections. Antibiotics are given during the acute episodes of pyelonephritis. Chloramphenicol is probably the most effective agent for urinary-tract infection, but it should be stopped as soon as there is any change in white cells, hemoglobin or platelets.—*Alexander J. Michie, M.D.*, associate professor of pediatric urology, University of Pennsylvania School of Medicine, Philadelphia.

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By Dorothy W. Errera, R.N.

White, Arthur: "Relation Between Quantitative Nasal Cultures and Dissemination of Staphylococci." *J. Lab. and Clin Med.* 58:273, August, 1961.

The fact of being a nasal carrier of staphylococci is of less significance than the extent of colonization. Two hundred fifty hospitalized patients were studied using slit-sampler air testing, which is more accurate than sweep plates.

Air samples of over 20 colonies per cubic foot of air were collected from the environment of 35 percent of patients who had over 100,000 colonies per nasal culture, but from only eight percent of patients who carried less than that number.

When the patients' sheets were shaken lightly for 15 seconds, there were twice as many positive samples and greater numbers of organisms per culture.

Of patients who were not nasal carriers, four percent had coagulase-positive staphylococci on their skin. Five percent of patients who had counts of less than 100,000 organisms per colony in a nasal culture had similar skin cultures; but 44 percent of patients carrying over 100,000 organisms had positive skin cultures. In 75 percent of instances, the staphylococci on the skin were the same phage type as those in the nose.

Carriers of small numbers of staphylococci appear to be no greater hazard as spreaders of staphylococci than noncarriers.

Condie, John D., and Ferguson, Donald J.: "Experimental Wound Infections—Contamination vs. Surgical Technic." *Surgery* 50:367, August, 1961.

What is the relationship of good surgical technic to wound healing?

The value of the tenets of good surgical technic was reconfirmed in this study in which bilateral wounds were made aseptically in a series of anesthetized dogs. Wounds were contaminated with an instillation of 2.5 ml. of fluid from a broth culture made from a patient's wound. Each instillation contained from 80 to 800 million staphylococci. The wounds were closed with a variety of technics using various suture materials. Daily inspection, cultures and histologic sections revealed that 70 percent of all wounds made were superficially infected, and in 88 percent of the 96 dogs used in the study, at least one wound was infected.

To emphasize the need for obliterating dead spaces in wounds, one wound was closed in four layers with a running 5-0 nylon suture, while its counterpart in the same dog was closed in seven layers, including the subcutaneous tissue.

In the 12 dogs studied, there were three infections in the seven-layer closures, and 11 infections in the four-layer closures.

Washing a contaminated wound with 250 ml. of sterile saline during the closure is of debatable worth. Nine of the 12 which were washed were infected; ten of 12 which were not washed were infected.

Superficial infection seemed to consistently accompany the use of interrupted cutaneous sutures and to be entirely absent when a continuous subcuticular suture was used.

Infection appeared to be increased by the use of heavy braided sutures, whether they were of silk or dacron. Monofilament nylon was the least troublesome of sutures studied.

The notion that extra handling and extra sutures incidental to multiple-layer closures increase the incidence of wound infection seems to have been proved groundless by this study. Accurate matching of tissue layers and obliteration of dead spaces appear to contribute significantly to good wound healing.

Lee, John C., and Fialkow, Philip J.: "Benzalkonium Chloride—Source of Hospital Infection with Gram-Negative Bacteria." *J.A.M.A.* 177:708, September 9, 1961.

Repeated warnings have been sounded about the need for caution when using the quaternary ammonium compounds for chemical disinfection. Their adsorptive properties have been described. Higher concentrations of solution to prevent deletion of germicidal agent have been urged. If the quaternary ammonium compounds are accidentally contaminated, they may support the growth of the contaminating organism, particularly if it is of the gram-negative group.

This report describes an outbreak of sepsis beginning with the admission of a woman with bronchitis, asthma and pneumonitis. An admission blood culture revealed a gram-negative bacterium of the Pseudomonas-Achromobacteriaceae groups. But this organism had no demonstrable part in her disease.

In the next six weeks, the same organism was recovered from blood and/or urine specimens collected from 15 patients with various diagnoses. All but one were housed on the same

floor of this 15-story hospital.

Four patients had definite clinical sepsis associated with the organism; two died, and the gram-negative organism was believed to be a contributing factor.

Sixty-five cultures were done on the feces and urine of personnel whose contact with patients was most intimate. The urine and feces of several patients with septicemia were examined. Settling plates were exposed in various spots around the ward and corridor.

No organism resembling that of the original culture could be identified in any of these cultures. It was not until a container of cotton pledgets immersed in an aqueous solution of benzalkonium chloride was cultured that the organism was recovered. The pledgets were used for disinfecting the skin before intramuscular injections, before venipunctures, and before collection of urine specimens.

Workers in the central supply room, using their bare hands, loaded sterile containers with sterile cotton. The aqueous solution, made in the hospital pharmacy in unsterile glass containers with deionized water, was added. [*No mention is made of quarantine before use or of the amount of solution present in the container.—ED.*] Personnel on the ward often removed pledgets with their fingers.

The authors do not suggest total abandonment of the quaternary ammonium compounds, but urge respect for their limitations and intelligent application. The need for strict asepsis is again emphasized with the emergence of the pseudomonas as another organism responsible for increasing numbers of hospital-acquired infections.

Kundsin, Ruth B., and Walter, Carl W.: "In-Use Testing of Bactericidal Agents in Hospitals." *Appl. Microb.* 9:167, March, 1961.

Technics for bacteriological monitoring of the environment are described. Cultures of air, floors, textiles, furniture, shelves, and lights are recommended as necessary for measuring the efficiency of cleaning-disinfecting routines.

At least three cultures from different areas of a floor in a room are advised so that an inordinately high count, which may be due to transient heavy soil will not confuse the analysis of an otherwise sanitary environment. Floor culturing has been valuable for exposing contamination in waxes (one with gram-negative rods was found), brushes, and mops. It is also a valid measure for in-use testing of germicides and technics of application.

Floor waxes, with and without germicide, were tested on ward and corridor floors (4,000 pair of feet in 24 hours on the latter). No significant difference in results was noted. The advantage in the wax which incorporates a germicide appears to be the latter's ability to inhibit bacteria growth during storage.

That germicidal laundry rinses inhibit growth of bacteria in soiled linen awaiting laundering was demonstrated by culturing wash water during various phases of the laundering cycle. A total of six organisms could be collected from the *entire cycle* when linen consistently washed with a hexachlorophene tallow soap was being processed. But 400 to 600 could be recovered from any *one phase* of the cycle when untreated linen was being processed.

The environment in an operating room in which there were 12 changes of air per hour, with eight percent of the air recirculated through electrostatic air cleaners, and housekeeping-sanitizing procedures were rigidly enforced, consistently yielded an average of no more than five organisms per cubic foot of air, with a fallout of four bacteria-carrying particles/square foot/-minute.

The bacterial population of a hospital bursts as organisms are introduced by patients, personnel, and air currents. It declines as organisms are removed by cleaning and ventilating. If removal is not a continuing process, the population rises until the environment is overwhelmed.

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All this year I've been besieged by salesmen with something new to prove sterilization of dressings.

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MACBICK

(Continued from page 75)

mally contain than in the skin of similarly treated normal persons. The same was true of basophils in the blood.

What apparently was happening, according to the research team, was that both those cells were responding to cold by dumping their granules. In turn this produced the allergic reaction.

Electronic Voice Helps Speechless

A new transistorized artificial larynx has been jointly developed by the medical staff of the National Hospital for Speech Disorders, New York, and the research laboratories of American Telephone and Telegraph Co.

The new artificial larynx weighs only seven ounces and is entirely self-contained and battery operated. Two models are available; one simulates a man's voice, the other a woman's.

When the patient holds the artifical larynx against his throat, it transmits vibrations into his throat cavity; the vibrations can then be articulated into words. Power is turned on and off and pitch varied by a simple thumb-operated switch.

The new larynx is hygienic, esthetically acceptable, easy to maintain, and is sold by AT&T for its actual cost price, $45.

X-Ray 'Stand-in' Protects Patients

A plastic and bone human replica enables a radiologist to "zero in" the radiation beam on its tumor target, thus avoiding harmful radiation effects to normal internal tissues.

Developed with the collaboration of Argonne Cancer Research Hospital, Chicago, Montefiore Hospital, New York City, and Lutheran Hospital, Cleveland, the instrumented human substitute is used to predict with considerable accuracy the dose of radiation to be received by a malignancy deep within the body.

The phantom, as such manikins are known in x-ray therapy, is constructed of a human skeleton around which is molded a special plastic material that absorbs radiation in the same way as does human soft tissue. With lungs and other air passages molded in place, the phantom closely approaches a scientifically proportioned "average man" from crown to mid-thigh. It is sliced into 35 segments, each about an inch thick, to provide access to the recording instruments.

The phantom "sees" and reports a radiation beam moving through its body by means of instruments which differ according to the type of radiation source. For conventional x-ray machines, each phantom segment is drilled with a grid of holes into which are inserted tiny metal recording tubes (ionization chambers). For use with supervoltage machinery and other high energy sources (betatrons, linear accelerators, cobalt-60), the amount of radiation passing through each segment is recorded on a sheet of film placed between the slices.

Beaver Islanders Finally Get M.D.

A doctor has been found for Lake Michigan's isolated Beaver Island. Dr. Sydney S. Schochet, of Sault Ste. Marie, Mich., took over the practice upon the retirement of Frank E. Luton, M. D.

The Beaver Island practice is subsidized by the state of Michigan and the state health department has been conducting a search for Dr. Luton's replacement.

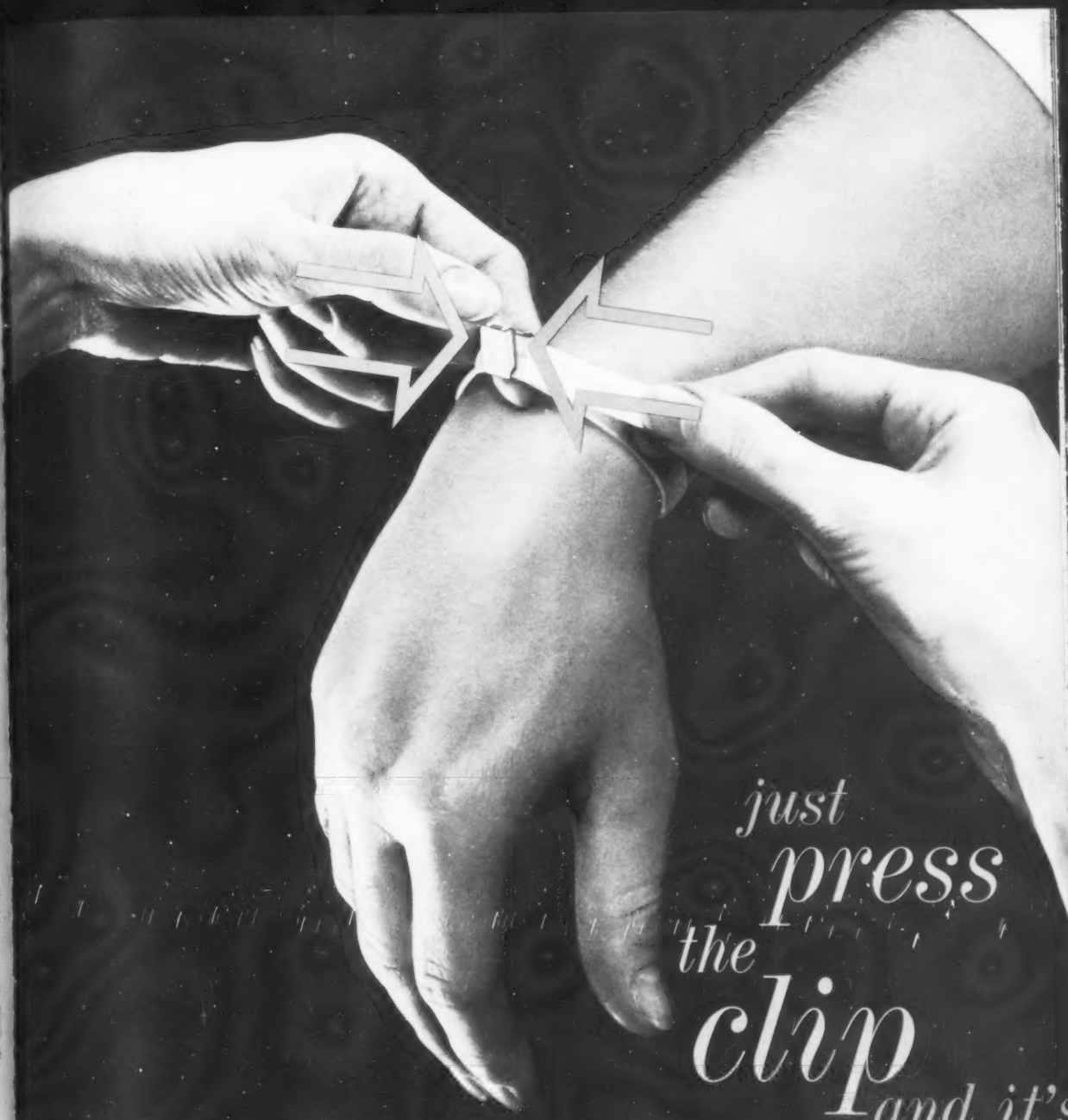
The island, 30 miles out in Lake Michigan from Charlevoix, has about 200 year-round residents and can be reached only by plane through most of the winter.

Scientists Wire Woolies in Temperature Tests

That homely butt of many a nostalgic joke, the suit of winter underwear, has now taken its proper place the the modern electronic scheme of things. Scientists exhibiting at the recent international conference of medical electronics in New York showed how the long johns have been wired for continuous temperature observation in the four extremities, the chest and abdomen.

These observations are extremely valuable in certain types of circulatory disturbances.

We wonder; is *nothing* sacred to the ever-probing scientist?



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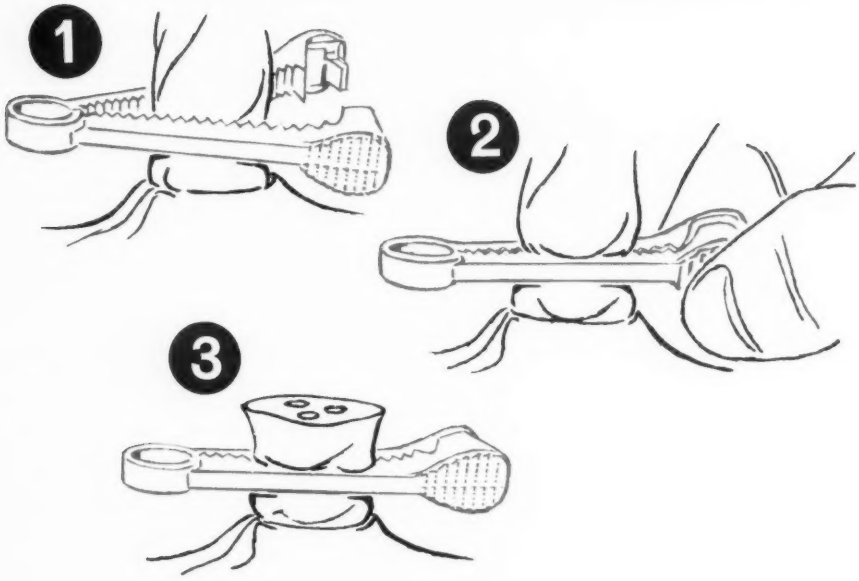

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Silicone Intestinal Decompression Tubes Less Irritating to Patient, Easier to Clean

By Meyer O. Cantor, M.D.*

A major advance in the management of intestinal obstruction was the introduction of the intestinal decompression tube in 1936 [1]. Since then, varied intestinal decompression tubes [2, 3, 4, 5, 6] have been developed in an effort to increase the percentage of successful intubations and decrease the time required to accomplish this.

With the passage of time, the technic of intubation [7, 8, 9, 10, 11, 12, 13] and its indications and contraindications have been well worked out. However, during this period, the comfort of the patient being intubated received little attention. In addition, the shortage of hospital personnel threw an increasing load upon the central supply department, whose function it is to have these tubes ready at all times for immediate use. The large amounts of crusted mucus adherent to the rubber and plastic intestinal decompression tubes and the odor of intestinal content made it a difficult and time-consuming job to clean and sterilize these tubes for re-use. The use of a fresh new tube in each patient would have resulted in a tremendous waste.

It appeared that any further improvement in intestinal intubation was probably to be achieved only by making the intestinal decompression tubes less irritating to the patient and easier for the central supply department to clean and sterilize.

The use of plastic tubes [14, 15] failed to improve the situation. Experience with these tubes revealed that large amounts of mucus became adherent to the tube in the nasopharynx. This outpouring of mucus by the patient is indicative of the irritating effect of the plastic tubes.

In an effort to increase the comfort of the patient and render the intestinal decompression tubes easier to clean in central supply, a solution of silicone (Siliclad, Clay-Adams) was applied to the rubber Cantor intestinal decompression tubes and the effect studied in 30 intubated patients. It was clearly demonstrated that these siliconized tubes were much better tolerated by the patient and were much easier to clean when returned to central supply.

This result was due entirely to the application of the silicone solution. This substance, being non-adhesive, did not permit mucus or intestinal content to adhere to its surface. As a result, when the tubes were returned to central supply it was found that relatively little mucus adhered or crusted upon its surface. The small amount found was easily washed off, and in considerably less time than was required to clean the nonsiliconized tubes.

Formerly, upon return to central supply, the ordinary rubber intestinal decompression tube usually required considerable scrubbing to remove all the tenaciously adherent mucus and crusted intestinal material. The tube was then put through the following routine:

Suction was applied through the

*Dr. Cantor, a surgeon, is from Grace Hospital, Detroit.

tube with soapy water or detergent until the tube was clear. The tube was then suctioned through and thoroughly rinsed first with tap water and then with distilled water. It was soaked for 24 hours in aqueous Zephiran, 1:1000, rinsed with tap water, then soaked for 24 hours in rose water to remove all odors. The tube then was suctioned through with distilled water, hung up to dry and reserviced with a new balloon, which was cemented on for each intubation.

This method of cleaning ordinary rubber intestinal decompression tubes was time-consuming and involved considerable labor, but it disinfected the tube, removed all odors, and thoroughly cleaned it.

The siliconized rubber Cantor tubes were cleaned much more easily because the mucus and crusts did not adhere to them. In other respects, the same method of cleaning and sterilizing was used. The ease of cleaning these siliconized ordinary rubber tubes definitely proved their superiority over the non-siliconized tubes from the point of view of central supply personnel.

Because of the proven advantages of the siliconized tubes, we believed that an intestinal decompression tube of silicone rubber would be even better. The Dow-Corning Co. manufactured such silicone rubber Cantor tubes for study. These rubber tubes contain silicone as the basic atom, Si-O-Si-O, instead of the carbon found in ordinary rubber.

Extensive clinical study using these silicone rubber tubes has proved them to be superior to ordinary rubber intestinal decompression tubes. The physical properties of silicone rubber are well suited for use in an intestinal decompression tube. These properties are:

(1) It is chemically inert and does not cause a tissue reaction.

(2) It is completely non-allergenic, so that allergic reactions to the presence of the tube in the nasopharynx do not occur.

(3) It repels liquid water and does not permit anything to stick to its surface, and it is not affected by body fluids.

(4) It will not support bacterial growth.

(5) It is highly permeable to intestinal gases, thus permitting intestinal decompression even through the intact tube wall in addition to the holes for decompression.

(6) Its elasticity and resiliency are excellent, so that the tubes resist attempts to kink, angulate, or obstruct by coiling.

A patient intubated with one of these silicone rubber Cantor tubes is much more comfortable, because considerably less mucus is excreted by the patient's nasopharynx and considerably less adheres to the tube. For this reason, it is possible to leave the tube in place as long as necessary without undue compliant by the patient.

When the tube is returned to central supply, the rubber balloon is stripped off and discarded. The mercury is then washed and saved for further use. The silicone rubber tubes are then simply washed in soapy water or detergent solution and flushed through with this soapy solution. This easily removes the small amount of adherent mucus or debris, since nothing can firmly adhere to the silicone rubber. The tubes are then washed and flushed through with tap water and hung up to dry for 24 hours. After drying,* each tube is placed in a small paper bag which is sealed ** with tape (the tape has a light streak which turns black during the sterilizing process). The bag is then autoclaved at 250° F. for 20 minutes. This assures us of a clean, sterile tube. The balloon is then tied on with a silk 00 tie, and the tube is ready for use.

Because cement will not adhere to the silicone rubber tube, the balloon of ordinary rubber must be tied onto the end of the tube instead of being cemented on. It must be tied on firmly with a double tie because the silicone rubber tube is slippery and the balloon tends to slip off unless firmly tied on.

This simplified method of cleaning and sterilization results in a considerable saving of time in central supply and assures a clean, sterile tube for the next patient. The amount of mercury required by the case being intubated is introduced into the balloon by the intern or resident at the patient's bedside. [16]

Each of the silicone rubber Cantor tubes was used repeatedly and repeatedly sterilized by autoclaving without any impairment to its qual-

"Davis, you've been nibbling at the High Energy diet again. . ."

*The steam sterilization of the lumen of the tubing is dependent on moisture being present to be converted to steam as the outer surface is heated to sterilizing temperature. Air is purged, and the inner surface is exposed to microbicidal steam. Otherwise, the lumen is exposed to essentially dry heat, and the 30-minute cycle is not adequate for destruction of pathogens in dry heat at 250° F.—ED.

**Whether or not the bag can safely be sealed before sterilization depends on how thick the paper is and whether it is permeable to steam. The author says that steam does penetrate the brown paper bag used in his hospital. If the bag were of waterproof or heavy Kraft paper, however, it should be left open and sealed after sterilization. —ED.

ity. The tubes were found to be almost indestructible by ordinary usage. They did not deteriorate or dry out with age or storage.

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Silicone Maintains Patency In Chest Drainage Tubes

Blockage due to blood-clot formation within chest drainage tubes has been avoided to a large extent by pretreating these tubes with silicone, according to George A. Harkins, M.D., surgeon, Children's Medical Center, Boston.

The silicone treatment, Dr. Harkins reported in the *Journal of Thoracic and Cardiovascular Surgery*,* makes it unnecessary to milk the tubes frequently in order to maintain patency, and drainage failure in these catheters is rare.

"We have been unable to detect any harmful effect from the use of silicone for this purpose, and we believe it has added to the ease and safety of postoperative care," he declared.

The application of the silicone is a simple matter which can be carried out with a large number of tubes simultaneously, Dr. Harkins said. The rubber tubes are washed, dipped into a bath of 5% Silicone,** rinsed in distilled water, and baked in the oven until dry (10 to 20 minutes at 160° C.). Then they are sterilized.

At the time Dr. Harkins wrote the article, he was a member of the department of surgery, Stanford University School of Medicine, and the staff of the San Francisco Institute of Medical Sciences, Presbyterian Medical Center, San Francisco. In the Presbyterian Medical Center, pleural catheters treated in this way had been used in more than 500 patients, and he recommended the adoption of this practice in thoracic surgery.

"In addition," he commented, "pretratment with silicone might afford better drainage in catheters placed following other operations, for example, after prostatectomy, radical neck dissection, and radical mastectomy."

*The Journal of Thoracic and Cardiovascular Surgery, October, 1960, p. 549. Published by the C. V. Mosby Co., St. Louis.

**Silicone, Z4141, Dow-Corning Corp., Midland, Mich.

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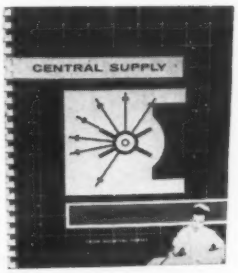

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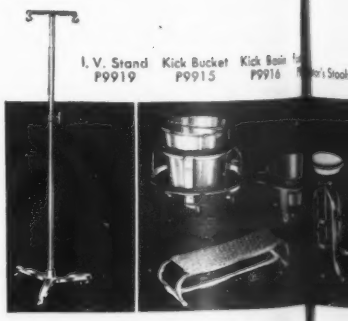

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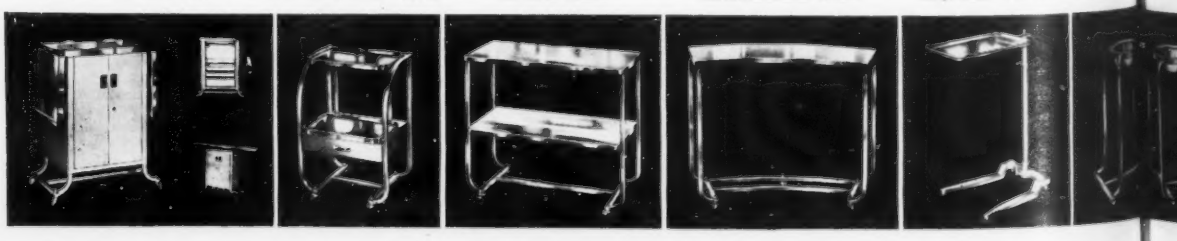

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Pioneer Poison Register System at Dow Chemical Co. is Simple, Complete

Of the many safeguards initiated for the protection of its workers, Dow Chemical Company's Poison Register is a pioneer system of major importance.

A large rotary index file and 10 treatment cards affixed to the wall immediately beside it in a treatment room in the medical building of the company's huge plant in Freeport, Texas, occupies less than several square feet of space. Yet these two simple resources represent an enormous amount of research, and encompass all necessary emergency treatment for poisoning due to any of the more than 1,500 chemicals used by the plant's 5,000 workers.

"Industry's search today for new chemicals and combinations is as restless and incessant as some of the chemicals are volatile," said D. J. Killian, M.C., in charge of the Freeport medical setup. "Chemistry is searching for more reactive compounds, and these are usually more toxic. Sometimes a chemical has proven so toxic that despite the industrial avenues it might open, it is dropped from our family of working chemicals."

The Poison Register was originated in Midland, Mich., home office of Dow Chemical, in cooperation with its biochemical research laboratory and medical department under the direction of Harold Gay, M.D., some 15 years ago. It marked the first effort on the part of a big company, not only to get all possible information on a compound, but to put all emergency treatment information in a readily usable form.

Much of the knowledge comes through animal research in Midland, and of course all toxicology work is done there. Results are sent to Freeport, where Dr. Killian's department refines the information and makes it available via the register.

The standard card reproduced with this article was taken from the rotary index file. In the lower right hand corner, under Treatment, are 10 boxes. Treatment for the chemical described on the card is indicated by an "X" in the correct boxes. The nurse refers to the treatment cards on the wall, and proceeds to administer the correct emergency measures according to number.

Information on the treatment cards, as shown below, is complete and succinct:

Card #1—Eyes

Irrigate at least 15 minutes total time with running water. Stain with fluorescein stain, and if no stain is visible, use Isopto-Frin drops p.r.n. If stain is present, call a doctor.

Card #2—Eyes

Irrigate eyes at least 30 minutes total time in running water. If corneal stain is present, steroid eye medication is indicated.

Card #3—Eyes

Prolonged irrigation beyond 30 minutes is indicated. Time should be

judged by the chemical involved and the degree of damage present.

Severe corneal damage is possible, and a combination of steroid therapy both local and systemic, along with mydriatic and antibiotic drugs, is indicated. Call a doctor.

Card #4—Skin

No special problem from skin absorption or burn. Shower and examine affected areas for evidence of irritation or burn.

No definite therapy indicated.

Card #5—Skin

Clothing must be removed and affected area decontaminated by soaking or showering for at least 15 minutes.

Doctor should be called if there is any evidence of irritation or burn.

Card #6—Skin

Doctor must be called regardless of apparent injury. Prolonged showering and decontaminating is indicated.

Card #7—Systemic

No particular problem from inhalation. If patient is asymptomatic, reassure him that this chemical is not harmful when inhaled.

No treatment is indicated if exposure is mild.

Card #8—Systemic

This material is irritating to mucous membrane and respiratory tract. Oxgen should be given if patient has any symptoms. Call a physician.

Card #9—Systemic

This material can be a serious threat to life, and if exposure is significant, oxygen and/or artificial respiration should start immediately.

Call a physician immediately. If the patient is not breathing, give 1 cc. Coramine I.V. slowly. An airway may be necessary if there is any obstruction to breathing.

Card #10—Ingestion

Stomach lavage should be started immediately. Use antidote listed in the Merck Manual, page 1386, located in drawer 3, or clear water.

Call a physician immediately.

Although the general public would be most unlikely to come into contact with the chemical compounds encountered by plant workers, the highly functional nature of the Dow Chemical Company's Poison Register might well serve as a model for registers in hospital pharmacies or emergency rooms.

Standard card reproduced below was taken from the rotary index file. In lower right corner, treatments for the particular chemical are indicated, and nurse refers to treatment cards on wall. Any special information is indicated on back of card.

THE DOW CHEMICAL CO. - TEXAS DIV. 7060 12-57 CHEMICAL EXPOSURE FILE

EYES	Vapor -- mildly irritating Liquid-- severly irritating
SKIN	Slightly irritating in small amounts. May cause blisters in large amounts. IS ABSORBED THROUGH THE UNBROKEN SKIN.
RESP.	Hazardous by inhalation.
SYSTEMIC	Resembles other cyanide compounds. Apparent widespread injury to the nervous system, respiratory system and digestive system.
SYMPTOM-ATOLOGY	Weakness, lightheadedness, headache, nausea, sneezing, abdominal pain, vomiting, loss of consciousness, cyanosis or evidence of asphyxia.
PECULIARITY	ODOR -- almond, new mown hay SYMPTOMS MAY BE DELAYED 1-2 HRS.
COMPONENTS	

STATE: Liquid SOLUBLE IN: Water

SYNONYM Vinyl Cyanide

CHEMICAL ACRYLONITRILE

TREATMENT											
1	2	3	4	5	6	7	8	9	10	X	SEE REVERSE SIDE
		X			X			X	X	X	

Back of card:

SPEED is the determining factor in treating exposure to cyanides. Immediately remove all possibly contaminated clothing and start decontamination with soap and water. Amyl Nitrite will probably have been used at the scene of the exposure. If the patient has definite symptoms of exposure then sodium nitrite should be started intravenously while someone else is calling a physician. Oxygen and artificial respiration may be necessary in serious cases. Further instructions can be obtained in the cyanide emergency kit located in the emergency room.

prescription pad

Urethral Lubricant

A new urethral antibacterial lubricant, 'Lubasporin', has been introduced by Burroughs Wellcome & Co., for lubricating urological and gynecological instruments when antibacterial action is indicated.

Lubasporin is used to prevent infection in catheterization, cystocopy, dilation, transurethral procedures, vaginal surgery.

Available in 5 Gm. screw-cap tube. Each tube accompanied by polyethylene applicator sealed in sterile cellophane packing.

Diuretic, Antihypertensive

Renese, (polythiazide) oral diuretic and hypertensive agent, has been introduced by Pfizer Laboratories. The new drug is said to provide high potency, rapid action, sustained effect, and a favorable sodium/potassium excretion ratio.

Renese is indicated in treating mild, moderate and severe edematous, hypertensive and other conditions responding to diuretic therapy. It has demonstrated antihypertensive activity in both edematous and non-edematous patients.

Available in 1 mg., 2 mg., and 4 mg. scored tablets.

Spasmogestant

Dactilase, called a spasmogestant by its manufacturer, Lakeside Laboratories, is indicated in a wide range of gastrointestinal disorders in which pain, spasm and gas are associated with faulty digestion.

The product combines the antispasmodic and mucosal anesthetic action of Dactil with the comprehensive digestant action of new standardized enzyme preparations. It is said to overcome pain and spasm and restore normal motility throughout the upper GI tract.

Supplied in bottle of 60 tablets.

Antibiotic

New antibiotic, Coly-Mycin Injectable, available from Warner-Chilcott Laboratories, was developed to help overcome serious, often deadly infections resulting from certain antibiotic-resistant organisms, especially *Pseudomonas aeruginosa*.

Coly-Mycin has been found especially useful in treatment of severe acute and resistant chronic urinary tract infections due to sensitive strains of gram-negative organisms.

Also indicated for gram-negative infections involving respiratory tract, surgery, wounds, burns, and blood poisoning.

Available in vials for intramuscular administration.

Antibiotic Aerosol

An antibiotic aerosol, Neosporin, is available from Burroughs Wellcome & Co., to combat superficial bacterial infections of the skin due to susceptible organisms and infections that occur in association with burns, skin grafts, biopsy sites, lacerations, infected eczemas, similar conditions.

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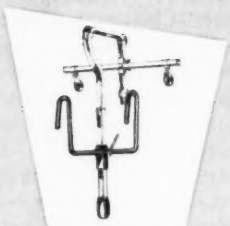

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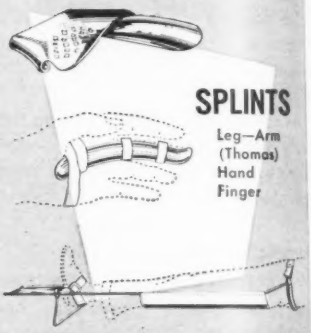
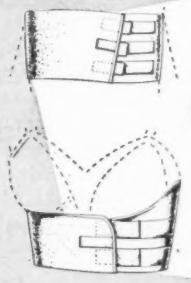
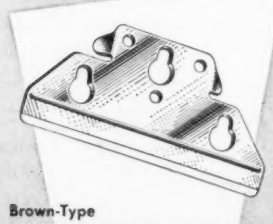


SPLINTS
Leg—Arm (Thomas) Hand Finger

INTERNAL FIXATION
Prostheses



RIB SPLINTS
Head Halters Arm Slings



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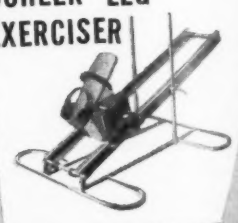

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THE LAB

The Prothrombin Consumption Test

By Conrad Wiet, M.D.*

The prothrombin consumption test is a quantitative determination of the prothrombin remaining in the serum, after the blood has coagulated under standardized conditions using the one-stage prothrombin time with excess labile factor and fibrinogen added.

At Cook County Hospital we use the one-hour method which was devised by Dr. Quick. It is performed as follows:

Five clean, saline-rinsed test tubes of standard size (13 x 100 mm.) are placed upright in the technician's tray. Tubes 1 and 2 are only saline-rinsed. However, to tube 3 is added 0.1 ml. barium sulfate-treated rabbit plasma; to tube 4 is added 0.1 ml. old serum, and to tube 5 is added 0.1 ml. red-cell hemolysate.

The tray is carried to the patient, and an atraumatic venipuncture is done with a sterile dry syringe to avoid contamination with tissue thromboplastin, which can alter the sensitivity of the test. A stop watch is started when blood first appears in the syringe. After the patient's blood is drawn, 1.0 ml. of it is added to each of the five test tubes, and all five tubes are then incubated in a water bath at 37° C.

Tube 1 is tilted every minute until a clot is formed. Then tube 2 is tilted every 30 seconds until it too clots. The amount of time required for clot formation in tube 2 is the clotting time. Fifteen minutes from the time of clot formation in tube 2, all tubes are rimmed with a dry stick. They are then centrifuged at 3,000 rpm for five minutes, and then re-incubated in the water bath for 45 minutes.

After 45 minutes have elapsed a serum prothrombin time is performed on tube 1 to determine whether the prothrombin has been consumed in the formation of the clot.

From tube 1, we transfer 0.1 ml. of serum to a clean test tube, and add 0.1 ml. barium sulfate-treated rabbit plasma, which is the source of Factor V and fibrinogen, the latter of which we assume has been consumed in the formation of the original clot. Factor V is added to offset the loss of V or labile factor which might be deficient as a result of the incubation. Then 0.1 ml. rabbit-brain thromboplastin is added, and lastly 0.1 ml. of a 0.025 Molar calcium chloride solution. A stop watch is started at the moment the calcium chloride is added.

The tube is briefly incubated (for five to seven seconds) in the water bath with gentle agitation, then observed for the first sign of clot formation. The normal is 16 seconds or over, which means most of the prothrombin has been consumed. This causes the prolongation of the serum prothrombin time. The same procedure is performed on tube 2 as a check on tube 1.

Should the serum prothrombin time be less than 16 seconds, the

*Dr. Wiet is a research fellow, Hektoen Institute of Medical Research, Cook County Hospital, Chicago. This article is taken from a paper given before the conference on laboratory service at the 1961 Tri-State Hospital Assembly in Chicago.

prothrombin has *not* been consumed in the formation of the original clot. We infer then that the intrinsic thromboplastin complex is defective, and use the remaining three tubes to evaluate and pinpoint the defect in the thromboplastin complex.

Tube 3 contains an excess of AHG (antihemophilic globulin, AHF antihemophilic factor), PTA (plasma thromboplastin antecedent), and Hagemen's factor (glass factor). We know from assay methods that these factors are not remarkably absorbed by barium sulfate plasma. Therefore, when a serum prothrombin time on tube 3 is performed and the end point is 16 seconds or greater, we can say that one of these three thromboplastin factors—AHG, PTA, or Hagemen's—has been deficient in the patient's intrinsic thromboplastin formation, which accounted for tube 1 having an activity of less than 16 seconds. In other words, an excess of prothrombin was still present in tube 1 after the original clot had formed because of a deficiency of thromboplastin factors.

Tube 4 contains an excess of PTC (plasma thromboplastin component), PTA, and Hagemen's, known from assay methods to be present in old serum. If the serum prothrombin time in tube 4 is 16 seconds or greater, these factors must have been deficient in the patient's plasma.

Tube 5 contains red-cell hemolysate, a platelet substitute. Therefore, if the serum prothrombin time on tube 5 is 16 seconds or greater, we infer the patient's platelet thromboplastic factor must have been deficient.

If tubes 1 and 2 are within normal limits—that is, 16 seconds or greater—tubes 3 to 5 are not essential for the completion of the test. A normal serum prothrombin time on tubes 1 and 2 means that the thromboplastin factors are functioning correctly and that the prothrombin has been consumed in the formation of the original clot.

If the results are equivocal (15 seconds or 17 seconds) or if a more sensitive test is desired, the prothrombin consumption test can be performed on platelet-rich native plasma instead of whole blood. This is particularly helpful for the diagnosis of mild hemophilia, because during clotting, a small amount of the powerful clotting factor contained in the erythrocyte is often liberated, which greatly influences the prothrombin consumption time and may cause a false normal value.

Preparing Test Materials

Barium sulfate-treated rabbit plasma: This must be made up fresh each day the test is to be run. It is prepared as follows:

Draw 150-200 ml. of blood from a healthy rabbit by cardiac puncture into an oxalated container (0.1 ml. sodium oxalate—1.34 Gm. %—to 1 ml. of rabbit blood). Certrifuge slowly (at 500 rpm) for 30 minutes to obtain platelet-rich plasma. Draw off platelet-rich plasma and recentrifuge at 3,500 rpm for 15 minutes to obtain platelet-poor plasma. Freeze in 1-ml. aliquots at —20° C.

When ready for use, add 100 mgm. barium sulfate to 1 ml. of platelet-poor rabbit plasma. Incubate for three minutes at 37° C. in a water bath. Centrifuge at 3,500 rpm for 10 minutes. Draw off the supernatant which is ready for use. When not in use, it must be kept in the refrigerator at 4° C.

Old serum: Draw 25-50 ml. normal human blood. Incubate for two hours at 37° C. in a water bath. Then centrifuge the clotted blood at 3,500 rpm for 15 minutes. Draw off the serum and store in the refrigerator at 4° C. for 72 hours (three days). Separate into 1-ml. aliquots and store at —20° C. until needed.

Hemolysate: Mix nine volumes of normal human blood with one volume of 0.1 Molar sodium oxalate and centrifuge mixture at 1,000 rpm for five minutes. Remove the supernatant of platelet-rich plasma and replace with an equal volume of 0.85% saline solution. Mix and centrifuge again at 1,000 rpm. Remove the supernatant and replace with saline solution. Repeat three more times with the speed of centrifugation increased to 2,000 rpm and the time increased to 20 minutes. As much of the buffy layer is removed as possible.

The erythrocytes are resuspended by stirring and then kept frozen at —20° C. for 12 hours. Upon thawing, complete hemolysis occurs. The preparation is stored at —20° C.

Platelet-rich native plasma: Transfer blood obtained by venipuncture to silicone-coated test tubes and place tubes in an ice bath. Either allow the blood to sediment or centrifuge it at 800 rpm for five minutes. Transfer 1 ml. of the plasma to a small glass test tube and place the tube in the water bath at 37° C. Centrifuge the tube 15 minutes after the plasma has completely clotted, re-incubate it at 37° C. for 45 minutes, determine the serum prothrombin time.

"Mrs. Parker is here, demanding a recount on her blood count."

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BUYER'S GUIDE

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701. Patient transfer system

At the AHA convention in Atlantic City this year, the exhibit which won the H.I.A. award introduced a new patient transfer system called Trancar. Manufactured by American Sterilizer Co., it is said to offer "safe, gentle fingertip transfer by one person from bed to any procedure point and return." Particularly, the transfer of critically ill patients can be effected without pain or shock.

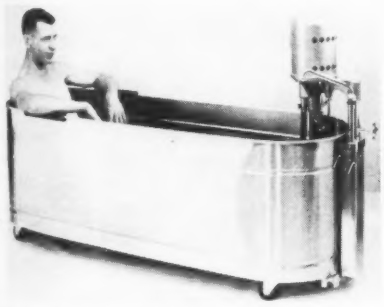
The system is based on the use of a 4-wheel Trancar with a sliding top which is cranked easily under a special Tranpad mattress, upon which the patient rests. The pad and patient are then cranked back to the Trancar, the edges of the sliding top are lifted and locked into an upright position forming side guards, the Trancar is unlocked from the side of the bed, and transport to any point begins. Arriving at destination, such as surgery, procedure is reversed.

The Tranpad mattress remains with the patient throughout all transfers. The patient is never lifted—instead the Trancar moves the Tranpad and patient in a horizontal plane with full, rigid support. Pad is extremely comfortable, x-ray penetrable and fully conductive. It is used on top of any pad or mattress normally in place on beds, surgical tables or other equipment.

The Trancar is adjustable in height from 30 to 37½ in. Nurse controls height easily from foot end with rotating handle. Trancar permits instant adjustment to Trendelenburg or reverse Trendelenburg. It can be used as recovery bed or OR table for emergency and E.E.N.T. surgery. Has built-in IV holder. American Sterilizer Co., Erie, Pa.

702. X-ray processor

New compact x-ray processor unit uses only ten feet floor space, is designed to meet time, space and capacity requirements of every radiologist's practice. Also adaptable as "satellite" processing station serving emergency, surgery, neurology areas in large institutions. Has same seven-minute processing cycle as larger units. Only film-feeding end of Model M-4 X-Omat which is 16" long, has to be in darkroom. Balance of unit, 34" long, is in lighted area. Produces radiograph correctly processed, dried, ready to read. Fast processing speeds patient care. Processes all listed sheet sizes of film, 5x7 through 14x36, and roll film, 17 in. wide or less. Eastman Kodak Co., Rochester 4, N.Y.

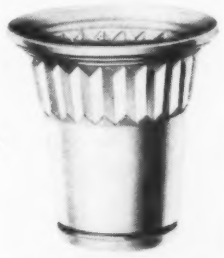


703. Whirlpool bath

New 'long and low' whirlpool bath for leg treatment in a horizontal position, is 66 in. long, has 18-in. tank depth, a necessity for injured and elderly patients, ease in entering tank. No high chair required. Mobile model consists of stainless steel tank supported by four ball bearing casters; two motor unit with powerful turbine ejector and aerator, turbine raising and lowering device, 3½ in. dial thermometer, electric drainage pump, filler hose and arm rests. Also available in stationary model with over-the-rim sanitary water inlet and combination drain valve and overflow. Ille Electric Corp., Reach Road, Williamsport, Pa.

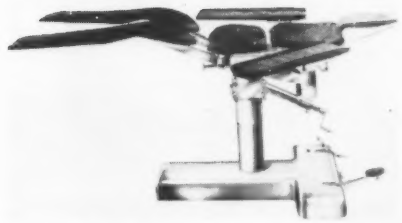
704. Nebulizer

All-purpose nebulizer is said to solve many problems of oxygen-humidity control, administration. Used with cold nebulization, relative humidity level averages approximately 44% at body temperature. With heated nebulization, relative humidity of 100% is achieved. Oxygen concentrations of 40, 70 or 100% are easily obtained. Design permits interchange of accessories. Puritan Compressed Gas Corp., Kansas City, Mo.



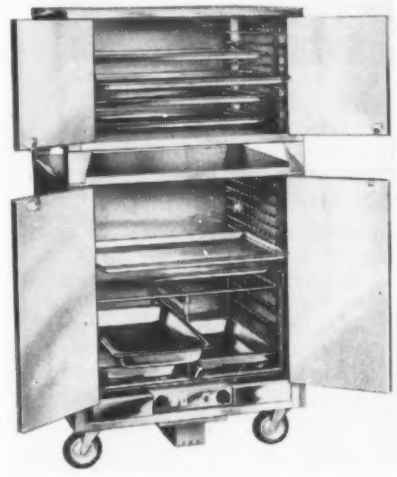
705. Plastic cup

Poly-Clinic disposable plastic cups feature one-piece construction, completely wax-free, tasteless, odorless, leakproof, non-absorbent. New rolled rim. Clean and sanitary; an aid against cross infection. For hot or cold liquids, in 6- and 8-oz. sizes. Meridian Standards Corp., 123 E. 23rd St., New York 10, N.Y.



706. OR table

Newly designed operating table, the Contour-Flex, features unique system of three anatomically designed tops, a supporting shaft and T-shaped base. According to the manufacturer, the table permits safer, better tolerated surgical posturing. Each top conforms to one of the basic operating positions—supine, prone, unilateral. It is claimed that use of three tops rather than usual one eliminates engineering compromises inherent in most OR tables. Easily interchangeable, lightweight tops are conductive plastic bonded by epoxy to aluminum. When not in use can be stored in small cart designed for that purpose. Hausted Div., Simmons Co., Median, Ohio.



707. Food cart

New design combination hot and cold food server, the 'Combo Carter', is available for hospital use. Versatile unit has two sections: lower section for hot food holds 32 to 36 hot plated servings with or without covers. Special heating system keeps temperatures even from top to bottom. Upper section for cold foods can be refrigerated with dry ice, cubed ice, or special Carter-Hoffman cold plates. Top section has four 5-in. legs which nest on top of heated section. Sections can be separated, used individually for additional flexibility. Upper unit can be placed on table or counter. Carter-Hoffman Corp., 1317 Morrow Ave., North Chicago, Ill.

708. Radio-Electrocardiograph

Instrument for monitoring patients by radio-electrocardiography during surgery, the RKG 200, transmits electrocardiography waves from patient to receiver. Receiver relays waves to conventional EKG recording or display equipment or to tape recorder. No obstructive cables between patient and monitoring equipment. Contained in lightweight, explosion proof case; powered by self-contained battery. Unit can be attached to operating table in various locations. One or more receivers may be located as far as 1,500 ft. from transmitter. Telemedics, Inc., Southhampton, Pa.

709. Sterilizing envelopes

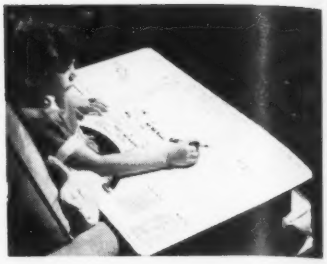
Auto-Seal sterilizing envelopes are available in separate sizes for 2 cc and 5 cc syringes, completing range of five sizes from needles to 50 cc syringes. New Auto-Seal envelopes are sealed tight by merely pressing down flap. No tape needed. Edward Weck & Co., 135 Johnson St., Brooklyn, N.Y.

710. X-ray gloves

Medical x-ray protective glove, made of lead-loaded DuPont neoprene, is said to provide superior protection to radiologist, allow greater dexterity, freedom of motion and manipulation. Can be disinfected, or cleaned with soap, detergent or chemical solutions. Outstanding protection is provided by permanently and evenly dispersed lead particles, insuring homogeneous opacity to diagnostic x-radiation. Offered in four sizes, including extra small. Charleston Rubber Co., Charleston, S.C.

711. Antiseptic

Ioprep, a stable, quick-acting, broad-spectrum presurgical topical antiseptic, combines in an iodophor, iodine and two highly active, nonionic surfactants. Low surface tension; enters small skin crevices to remove loose cells, residual debris. This action affords maximum exposure of surface bacteria to iodine complex. Bactericidal; effective against all species of pathogenic bacteria including antibiotic-resistant strains. Johnson & Johnson, Hospital Div., New Brunswick, N.J.

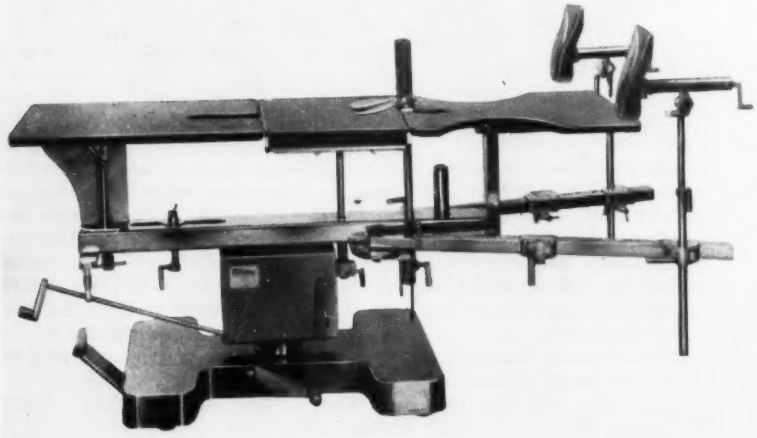


712. Lap board

Unique Hawaiian OOha (lap) board has two useful sides covered with durable, washable vinyl. Children's side is colorfully printed with eight intriguing games that can be played over and over with ordinary crayon on soft pencil. Surface can be erased and cleaned with a damp cloth. Ideal for pediatric ward; keeps children amused for hours. Board also offers large serviceable work area for adult use. Particularly useful for hospitals. Easily stored when not in use. Sturdevant Mfg. Corp., 14351 Ilene Ave., Detroit, Mich.

713. Fiberglass trays

Low cost fiber glass trays are strong, lightweight. Made of new fiber glass mat and polyester resin; compression molded for long life. Silent, acid and stain-resistant, washable in mechanical dishwashers. Unaffected by detergents. Choice of six solid colors, completely permanent. SiLite, Inc., 2600 N. Pulaski Rd., Chicago 39, Ill.



714. Orthopedic table

Ortho-Trac orthopedic and surgical table is designed to handle every type orthopedic surgery, much general surgery. Foot-operated hydraulic control; conductive table tops. Cassette tunnel to accommodate 14x17" cassette. Built-in facilities to accommodate grid for A.P. views. Famous Doctor Clayton Foot Plates conform anatomically, allow better positioning and tie for holding foot. Readily accessible Trendelenberg control; 18° Trendelenberg tilt, 17° reverse tilt. Completely stainless steel base for cleanliness, durability. Zack Rogers Associates Inc., 5 Broadway, East Paterson, N.J.

715. Pregnancy test

Immunologic test for pregnancy does not require use of animals. Clinically tested, found to be as accurate as previous biologic tests involving laboratory animals, makes accurate readings available within four hours. Said to be an accurate, scientific test for early diagnosis of pregnancy. Uncertainties of reports, availability of animals in summer months no longer a problem in labs. Ortho Pharmaceutical Corp., Diagnostic Div., Raritan, N.J.

716. Head halter

Inexpensive disposable Diskard head halter is made of paddings, traction cords. One size fits all patients. Easily fitted for either hyperextension of flexion. Double paddings hold traction cords away from neck to prevent pressure. Zimmer Mfg. Co., Warsaw, Ind.

717. Labels

An answer to a problem in building maintenance is a set of labels for buckets, chemicals, containers, other cleaning supplies. Labels are used in a new recommended procedure of separately labeling all equipment, solutions and supplies for a more efficient, orderly system. Imprinted 'disinfectant', 'solution-strip', 'rinse', 'pick-up', and 'wax'; 6½ x 1½", easily visible. Market Forge Co., Everett 49, Mass.

718. Rug cleaner

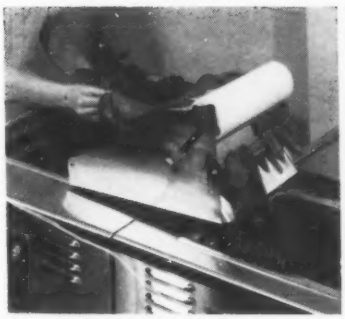
Combination rug cleaner, nap restorer, works efficiently on most rugs. Leaves no undesirable odor, will not harm rug colors. Restores resiliency to rug nap, retards mildew, prevents matting of cotton and synthetic fibers. Dries evenly, does not cause resoiling and provides a neutral cleaning. Davies-Young Soap Co., Box 995, Dayton, Ohio.

719. Plastic tumblers

Decorative designs accent a new line of plastic tumblers, available in a variety of sizes, styles, with regular and sham bottoms. Molded of crystal plastic, unbreakable, dishwasher-safe, nonconductive to reduce sweating. Columbus Plastic Products, Inc., Columbus, Ohio.

720. Utility cart

The "Compact", a six-shelf stainless steel utility cart, is said to handle twice the work of one ordinary utility card in same floor space. Made of heavy gauge stainless steel, cart is offered in two models: #333, shelf size 15" x 24"; #334, shelf size 17¾ x 27". Shelves are sound deadened with underside padding, have clearance of 6". Total height of cart is a convenient 40", carrying capacity 200-lbs. Easily maneuverable. Lakeside Mfg. Co., 1977 S. Atlas St., Milwaukee 7, Wis.

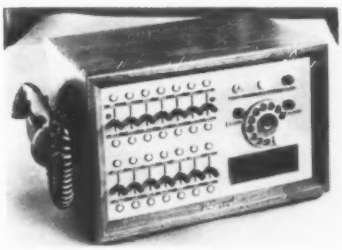


721. Glove wringer

New Rotary glove wringer is constructed so fingers of rubber gloves are inserted between rollers first, and expel water from tips toward cuffs. Brings gloves, fingers first, under second soft plastic roller, which squeezes out excess water. Compact unit is designed as companion unit to Rotary equipment, may also be used with other washers or for gloves washed by hand. Rotary Hospital Equipment Corp., 1746 Dale Rd., Buffalo 25, N.Y.

722. Glove lubricant

Bio-Sorb glove lubricant cream is said to be non-irritating, non-sensitizing, non-toxic to tissue. Eliminates a common source of O.R. dust. Distributes uniform film of lubricant over all hand surfaces, decreases perspiration, leaves no greasy film on hands. Has rapidly evaporating base, leaves lubricated hands completely dry for gloving. Emollient effect. Packaged in sterile foil packets for maximum convenience. Ethicon, Inc., Somerville, N.J.



723. Nurses station

Nurses station permits two-way, confidential conversation between nurse, patient. Instantaneous contact with patient's speaker is achieved by flick of a key. Nurse does not have to leave her work post; patient does not have to change position or raise his voice. In case of power failure, entire system automatically goes on standby power. Station is part of a complete line of hospital communication equipment produced by the company. Dictograph Products Inc., Danbury, Conn.

Films, New Literature

725. Lab Equipment

New 1128 page general catalog of new and recent lab equipment has just been published by Aloe. Contains comprehensive descriptions, illustrations of equipment for latest technics; indexed for rapid product location, with cross references. Aloe Scientific, 1831 Olive St., St. Louis 3, Mo.

726. Chemicals

New, enlarged 46-page catalog of biochemicals includes rare sugars, amino acids and derivatives. Feature of the 1961 catalog is the inclusion of structural formulas in addition to specifications, systematic names, plus commonly used synonyms and prices. Pfanstiehl Laboratories, Inc., 1219 Glen Rock Ave., Waukegan, Ill.

727. Diabetics

"Diabetics Unknown" is the title of a booklet and film release to stimulate the search for the million-and-a-half unknown cases of the disease. The 25-cent pamphlet deals with all phases of the disease—symptoms, treatments, control. The film covers the same topics. Public Affairs Committee, 22 East 38th St., New York 16, N. Y.

728. Perfusion apparatus

Technical data bulletin on the Clark-Selas perfusion apparatus presents complete description, detailed drawings, highlights of the compact unit's principal functions, advantages and unique method of oxygenation. Selas Flotronics, Spring House, Pa.

729. Ulcers

"If I Had an Ulcer," is a photographic record of a lecture by Dr. Philip Thorek, professor of surgery, Cook County Graduate School of Medicine, on peptic ulcers. For the film discussion, ulcers are divided into two categories, gastric and duodenal. Treatment and complications are discussed. This film, prepared under a grant from Warner-Chilcott Laboratories, was picked as best scientific film at the recent International Festival on Scientific Films, Turin, Italy. The 27-minute, 16 mm. color, sound film is available for showing to professional groups from the Film Department, Warner-Chilcott Laboratories, 201 Tabor Road, Morris Plains, N. J.

730. Antibiotics

More than 90 articles on current research on antibiotics are presented in "Antimicrobial Agents Annual—1960", published by the Society for Industrial Microbiology. Effects on cell membrane permeability, protein synthesis and cell wall synthesis, as well as competitive inhibition of various antibiotics are discussed in detail. Use of antibiotic sensitivity discs is described. Recent research on new antifungal antibiotics is presented in some papers. Plenum Press, Inc., 227 W. 17th St., New York 11, N. Y.

731. Snow melting

Snow melting knowledge is summarized in a new fact-filled, illustrated brochure published by Revere. "Snow Melting Systems of Copper" offers solutions for underfoot hazards, difficulties in access for employees, visitors, tracked-in slush and dirt, costly snow removal problems. Brochure provides general recommendations, specifications for various types of installations. Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.

732. Heating, cooling

New 24-page booklet, Dean Technical Data Bulletin No. 356, contains new information on heating, cooling, heat transfer; an instantaneous LMTD Chart, how to figure heating load; how to select heating surface; pressure drop short cuts, other useful information. Dean Products, Inc., 1042 Dean St., Brooklyn 38, N. Y.

733. Soap dispensing

Four different systems of dispensing hand soaps in hospital washrooms are described and evaluated in new data sheets just issued by Puritan. Report impartially evaluates various advantages of powdered soap systems, liquids, lathers and cake soaps. Data also includes suggestions for mounting, operation and care of soap dispensers of all types. Puritan Chemical Co., 916 Ashby St., N.W., Atlanta 18, Ga.

"Ninety-eight percent cotton and two percent hexachlorophene."

Hospital Topics **film review of the month**

Early Management of the Severely Burned Patient

Edwin H. Ellison, M.D.
Roger D. Williams, M.D.

Film presents the major goals of burn treatment: preservation of life, prevention of infection, early rehabilitation, and prevention of disabling deformities. "The physician therefore must have a clear-cut plan in all stages of treatment using an accepted method with meticulous attention to every detail, which, together with early debridement and grafting of the burned area, will assure satisfactory results."

Shown is a third degree burn of 25 percent of the body surface and a third degree burn of the face, neck and scalp. Operative sequences depict the methods of treatment, either open or closed. Postoperative pictures show the patient before final cosmetic surgery.

Stressed are important steps in patient management: early transportation and gentle handling; adherence to sterile technics to aid in preventing infection; physician's assessment of the patient's general condition; treatment and prevention of shock; burn estimation; evaluation for determination of fluid and electrolyte requirements; use of urine output as an indication of adequate fluid therapy and/or possible renal breakdown; initial debridement and application of occlusive absorptive dressing; and interim care until time of grafting.

Color, sound, 30 minutes, 16 mm.

Obtainable without charge for use by medical and hospital groups. Address Surgical Film Library, American Cyanamid Company, Surgical Products Division, 1 Casper St. Danbury, Conn.

American Hospital

Technical

Photos, starting directly below and reading clockwise, are:

Harry Lawler, of Debs Hospital Supplies, describes Correc-Temp food service system to Muriel Wescott, assistant administrator, Monmouth Medical Center, Long Branch, N.J. C-740.

John Griffith (l.), professor of hospital administration, University of Michigan, Ann Arbor, is interested in Central Monitor shown by James Meyer, of Electronic Medical Systems, Inc. Instrument detects, displays, and permanently records systolic blood pressure, heart rate, temperature, respiration. C-741.

Ed Thornburg, of Ar-Kay Industries, Inc., discusses hospital specialties with Harry W. Benjamin, Tri-County Hospital, Springfield, Pa., and Mary T. Kehan, Kensington Hospital, Philadelphia. Items shown included Aeroplast Vi-drape and spray-on dressing, Pioneer Rollpruf surgical gloves, many others. C-742.

Marvin J. Mulroy, of Scovill Mfg. Co., shows Eleanor Brownlee, assistant director of nurses, Salem County (N.J.) Memorial Hospital, firm's stainless steel grippers on hospital gowns. C-743.

New automatic metal utensil washer for nursing units is shown at American Sterilizer Co. booth. L to r.: Amy Crawford, director, Tressa Cathcart, R.N., and Marte Pierce, director of nursing, Household Pennsylvania Hospital, Philadelphia; Edwin Taylor, director, Graduate Hospital of the University of Pennsylvania, Philadelphia; John F. Berry, administrator, Degoebriand Memorial Hospital, Burlington, Vt.; J. Shean, firm representative. C-744.

Al Beale (r.), of Arwood, shows Hubert Johnson, director of purchasing, University of Rochester (N.Y.) Medical Center, that one leaf of Gamophen skin cleaning leaves is ample for thorough hand washing. Product has hexachlorophene base. C-745.

All photos by Hospital Topics

Association Convention

Exhibits

Photos, starting directly above and reading clockwise, are:

Frank Langer (r.), of The Burdick Corp., discusses new line of cardiac monitoring, defibrillating and pacemaking equipment with Donald MacIntyre, superintendent, Kingston (Ont., Canada) General Hospital. C-746.

Bernard Schwartz, of Telemedics, Inc., points out feature of new RKG 200, radio-electrocardiograph for monitoring patients during surgery to Don Dinger, Muskogee (Okla.) General Hospital. Instrument, miniaturized broadcasting system, transmits electrocardiographic waves from patient to receiver which relays them to conventional EKG recording or display equipment, or to a magnetic tape recorder. C-747.

George Wallerich, president, V. Mueller & Co., demonstrates one of new Starline Super 60 Series surgical pumps for Gerald Flynn, director, Goshen (N.Y.) Hospital. Line includes aspirator, ether-aspirator, portable and heavy-duty aspirators. C-748.

New task-basket, part of Geerpres Wringer, Inc., line of mopping outfits, is shown by representative Herbert Bard (l.) to Sevrin Berge, purchasing agent, Royal Alexandra Hospital, Edmonton (Alta., Canada) Hospital. C-749.

Phil Nichols (center), of Carolina Absorbent Cotton Co., demonstrates strength of surgical dressing for Walter Mende (r.), of Holyoke (Mass.) Hospital, while firm representative W. Reid Caldwell watches on the left. C-750.

L. T. Chandler (r.), of Edward Co., Inc., looks up a specific item for Egon Rassow, member of an export operation of hospital equipment to overseas areas. Company showed nurses' audio-visual call and psychiatric alarm systems. C-751.

AHA Technical

Photos, starting directly below and reading clockwise, are:

Reese E. James (l.), administrator, Winchester (Mass.) Hospital, tests one of the unit locks of stainless steel shown by the P. & F. Corbin division of American Hardware Corp. Company representative F. Heil describes the features of the heavy-duty, easy-to-install units. C-752.

Earl M. Pelter (l.), administrator, Tyrone (Pa.) Hospital, has many interested inquiries for Ronald Pfarr, of McKesson & Robbins, Inc., regarding the arrangement of hospital pharmacy fixtures and equipment. Functional display was based on time and motion studies in hospital pharmacies. C-753.

Hugh O. Roberts (l.), assistant administrator, St. Luke's Hospital, Bethlehem, Pa., and Edward Kamberg, of Chicago Dryer Co., are absorbed in the mechanics of the new automatic flatwork folding machine for hospital laundries. C-754.

Tom Tash, of Minnesota Mining and Manufacuring Co., gives an "on-the-face" demonstration of the new 3M surgical mask for Clara Steiner (l.), Lutheran Hospital, Fort Wayne, Ind., and Minnie Reiff, Murphy Medical Center, Warsaw, Ind. Mask is said to be far more efficient than similar products, is comfortable, convenient, completely disposable. C-755.

L. N. Kopman (l.), of Fairbanks, Morse, describes the new mobile hospital scale, a multiple utility concept in precision weight observation to Fred S. Welsh, administrator, Brookside Hospital, San Pablo, Calif. Scale gives safe, natural support. C-756.

R. J. Loos, of Winthrop Laboratories, Inc., tells Marion Fenstermacher, accountant, State General Hospital, Connellsville, Pa., about Carbocaine-local anesthetic, combining best features of older drugs with exceptional new advantages, including quicker, more prolonged anesthesia. C-757.

Exhibits (cont'd)

Photos, starting directly above and reading clockwise, are:

Carl Reisman, of Ipco Hospital Supply Corp., details one of company's items for Sister Mary Theola, OB supervisor, Resurrection Hospital, Chicago, Ill. Products show included OB and OR packs, Linex—new waste disposal liner—and the IPCO IV arm board system. C-758.

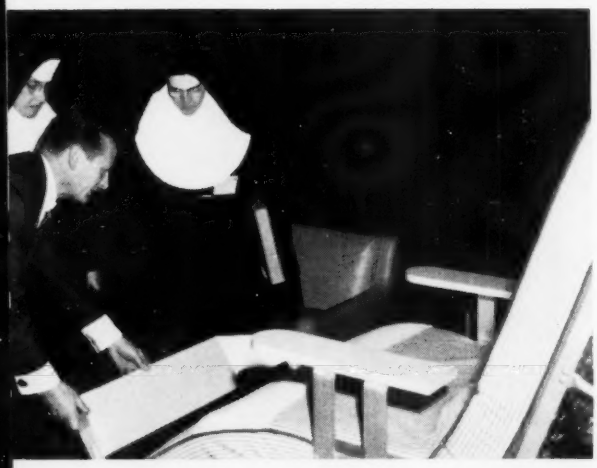
All eyes are up as Ernest Salerno, of Medical Sky Hook Co., demonstrates operation of IV hanger which moves in a stainless steel track mounted to the ceiling for Mary Ann Murray (l.), dietitian, and Zetta Thomas, director of dietetics, Temple University Hospital, Philadelphia, Pa. C-759.

M. Squire (r.), administrator, Forest Hospital, Des Plaines, Ill., examines new web-foot mop shown by J. E. Ludwig, of South Eastern Cordage, Inc. Patented mop design prevents cords from becoming tangled in use or washing; fits all standard handles. C-760.

Eugene Rodin, M.D., of Ivanhoe Enterprises, Inc., shows new infant restraining tray to Ann E. Ryle, director of nursing, Grace New Haven (Conn.) Community Hospital. Pediatrician-designed tray holds any baby from four-and-a-half to ten-and-a-half pounds gently but firmly, without pressure. C-761.

Color choice of Dial soap, bacteriostatic bar available in three sizes, is shown to Sister Mary Grace, of Mercy Hospital, Johnstown, Pa., by S. M. Kurrie, of Armour & Co. Also displayed was Velva-Soft-G, antibacterial fabric conditioner. C-762.

C. H. Proffen, Jr., of Hill-Rom, gives factual information on the all new Model 48 intensive care bed to Kermit H. Gates (l.), director, Department of Hospitals, Miami, Fla., and Charles C. Hillman, M.D., hospital consultant of Miami. Also shown were new all-electric bed, electronic bedside cabinet, cubicle screening, furniture and other hospital items. C-763.



AHA Technical

Photos, starting directly below, and reading clockwise, are:

John Cantu, Modern Controls Corp., explains to Mrs. J. B. Tallent, Norfolk (Va.) Community Hospital, how Modern's narcotic control system delivers tablets from pharmacy to nurse's station in locked holders. C-764.

Abbott Laboratories exhibited the latest equipment for IV administration of solutions and blood. Ken Hawthorne talks disposables with Sister Margaretta Maria, St. Vincent's Hospital, New York City (1.) and Sister Claire Marian, assistant ORS, St. Vincent's. C-765.

Identification bands prompted a discussion between Fred R. Wallich, Wallich Laboratories (c.), and Beatrice Gisser, R.N., director of nursing services, and Abraham Karetnick, manager, Ocean Park Nursing Home, Lakewood, N. J. Bands have strong fastener, need no tools. C-766.

Converter Bed changes position; nurse can rotate patient into sitting position without touching him. Mother Mary Edith, St. Joseph Savanah Motherhouse, Baltimore, (1.) and Mother M. Carlotta, president, board of trustees, Mercy Hospital, Baltimore, look on; J. J. Cykman demonstrates. C-767.

Leo A. Mistrik (1.), business manager, Graduate Hospital of the University of Pennsylvania, Philadelphia, inquires about Tab Products Co.'s Spacefinders. Bud Parke explains; one unit's capacity equals two four-drawer files, takes 30-50 percent less floor space. C-768.

Rubbermaid, Inc. exhibited waste containers and new molded laundry and handling truck line. Bill Judson (1.) points out features of waterproof, noiseless containers to Herbert T. Brown, president, Howard Park General Hospital, New York City, and Mrs. Brown. C-769.

Exhibits (cont'd)

Photos, starting above, and reading clockwise, are:

Dallons Laboratories representative Phil Altman (l.) is having an EKG taken—he's wired to the monitor, which picks up impulses as he moves about. Bob Byrne, administrator, Providence Memorial Hospital, El Paso, Tex., watches readings on monitor screen. C-770.

Multi-Clean Products' stainless steel Imperial vacuum is the center of attention for (1. to r.) C. J. Tyler and Dan McNeely of Multi-Clean, and Norman H. Meyer, business manager, Hospitale Silvestre, Rio de Janeiro, Brazil. Versatile machine can be adapted to clean overhead fixtures, venetian blinds, upholstery, as well as floors. C-771.

Sister John Elizabeth, anesthetist, St. Joseph's Hospital, Baltimore, stops by the Puritan Compressed Gas Corp. booth to talk I.P.P.B. units with representatives Dick O'Brien and Gordon Everson. Also featured was the new Puritan seal for U.S.P. medical gases. C-772.

Mead Johnson Laboratories' Enfamil was the subject for a serious talk between Mrs. D. J. Pessagno (c.), Mercy Hospital, Baltimore, and representative Wayne Hoffman. Emily Ozazewski of Mercy looks on. Company showed complete line of nutritionals. C-773.

Ray Martz' (1.) explanation of the Minneapolis-Honeywell Regulator Co.'s complete hospital automation system commanded the attention of Maj. Ben Ansley and Col. Harold Funsch, ATC, Randolph Field, Texas and Maj. John E. Donnelly, USAF Hospital, Moody AFB, Ga. Centralized control setup include alarm, fire detection systems. C-774.

Ioprep, Johnson & Johnson's non-staining presurgical antiseptic is the attraction for an interested group at J & J's booth. L. to r.: Eleanor M. Irons, O.R. supervisor, Irene A. Blake, central supply and Ruth C. Fox, central supply supervisor, West Jersey Hospital, Camden. Joseph P. Kearney supplies information. C-775.

AHA Technical

Photos, starting below, and reading clockwise, are:

Hollister's exhibit featured Ident-A-Band patient identification system, including bands with preprinted correlated numbers for OB. Gerard R. Lorenz (l.), administrator, Milford (N.J.) Memorial Hospital stops to chat with Mrs. Alice Barnes and Don Anderson representing Hollister. C-776.

Robert Schade stands ready to demonstrate the Foregger Long Island model anesthesia machine to Dorothy McFarland, director of nursing, and Ruth M. Edwards, assistant director of nursing, Rolling Hill Hospital, Elkins Park, Pa. Units are available with up to eight flowmeters. C-777.

Cubicle and shower curtains were displayed by Jiffy Join, Inc., as well as silent aluminum tracks. Thomas C. Nash shows fabrics to Bedrich Schur, of Walter S. A., Sao Paulo, Brazil. C-778.

Bauer & Black featured their Curity S-E Pack which delivers a sterile sponge without fear of contamination. Stanley Boyle talks with Sister Mary Venard, of Our Lady of Mercy Hospital, Coldwater, Ohio and Sister Mary Isidore, Mercy Memorial Hospital, Urbana, Ohio. C-779.

Surgilope SP sutures, and the SP Service Program which provides for reprocessing of sutures, rated top interest from Lorraine A. Shaw, general staff nurse, and Patricia Pressman, of Sacred Heart Hospital, Allentown, Pa. Walter Macdonald of Surgical Products Div. American Cyanamid, explains the system. C-780.

A hot-and-cold service cart exhibited by Ref Dynamics featured removable trays that lock into position to prevent slipping. Robert Gross, (l.), board of directors, and Martin S. Freeman, executive director, Hebrew Home for the Aged, Hartford, Conn., watch Martin Haver's demonstration. C-781.

For further information about the products mentioned on pages 112-119, see postcard opposite page 140.

Exhibits (cont'd)

Photos, starting above, and reading clockwise, are:

Helmer R. Miller (l.) gets ready to answer questions put to him by Howard M. Taft, of the Women's Medical College of Pennsylvania, Philadelphia, about Clark Floor Machine Co.'s Clarke-Amatic battery-powered floor maintainer and the new compact model. C-782.

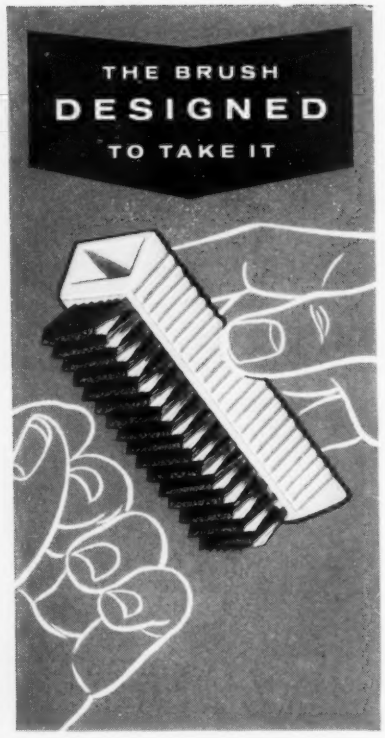
Simmons Company, Hausted Division, featured the new Contour-Flex surgical table. James Scott, consultant to the Hausted Division, drew a crowd as he demonstrated the versatility of the tabel's three separate tops, which provide for the supine, uni-lateral, and prone positions. C-783.

An intensive care station designed by National Cylinder Gas incorporates monitoring and suctioning apparatus into a pull-down unit. Angie Liberatore points out features to H. W. Maysent, (l.) associate director, Lankenau Hospital, Philadelphia, and Forrest L. Gill, chief, inventory management, VA Hospital, Philadelphia. C-784.

Roland Higbee, representing Institutional Industries, Inc., talks with John W. Hayman, administrator, Caldwell (Ida.) Memorial Hospital about III's sterile and miscellaneous supplies truck. Sturdy construction, silent wheels are two important features. C-785.

The new Pulse Air alternating pressure mattress pad was shown by Gaymar Industries' John Whitney (l.), to James M. Wilson, purchasing agent, Cooperative Supplies Service, Atlantic Highlands, Newark, N. J. and the Rev. Michael J. Lease, procurator. Pad design includes ventilation ports to permit freer passage of air. C-786.

The Eli Lilly & Co. exhibit encouraged passersby to stop and ask questions. Here Lilly representative T. M. Bergstresser (r.) demonstrates new aerosol packaging of Merthiolate to Dennis W. Campbell (l.) chief engineer, and E. L. Deering, assistant administrator, Roanoke (Va.) Memorial Hospital. C-787.



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Most Firms Will Hire Discharged Mental Patients

How much employer resistance is encountered by patients discharged from state mental institutions? Dr. Harvey E. Wolfe, Longview State Hospital, Cincinnati, surveyed top officials of 251 manufacturing concerns hiring from 100 to 14,000 employees, and 934 firms hiring less than 100.

Employers in both groups, according to Dr. Wolfe, showed significantly favorable attitudes toward hiring former mental patients. Forty-four percent of the larger employers said they would be "interested" or "very interested." Fifty-five percent of the smaller employers were in the "interested" categories.

Mental Hospital Offers Lecture Series

Suicide, overeating, and neurosis in marriage are among the topics scheduled for discussion by experts in the field of mental illness in a lecture series sponsored jointly by Forest Hospital, Des Plaines, Ill., and the Chicago Board of Health.

The first session in the nine-month series was given Oct. 25 at the AHA building in Chicago. Subsequent lectures will be given at the suburban hospital.

The first lecture, titled "Suicide: Trauma, Treatment and Taboo," was delivered by Edwin S. Shneidman, Ph. D., co-project director, Suicide Prevention Center, Los Angeles. The next presentation, "Eating Disorders," will be given Nov. 22, by Hilde Bruch, M.D., clinical professor of psychiatry, College of Physicians and Surgeons, Columbia University.

Respiratory Pathogens Found Nonseasonal

Despite seasonal peaks of respiratory disease, the hemolytic streptococcus *Haemophilus influenzae* and the pneumococcus can be found throughout the year in a healthy population.

Monthly cultures of 556 persons in 97 families were taken over a seven-year test period. If presence of bacteria alone were responsible for bacterial respiratory illness, then it would follow that there would be a steady occurrence of such disease throughout all the seasons of the year.

Dr. Henry Stimson Harvey of the Boston University School of Medicine suggests that some other factors, such as seasonal changes in the persons themselves, are responsible for the seasonal fluctuations in respiratory disease.

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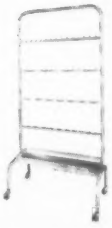
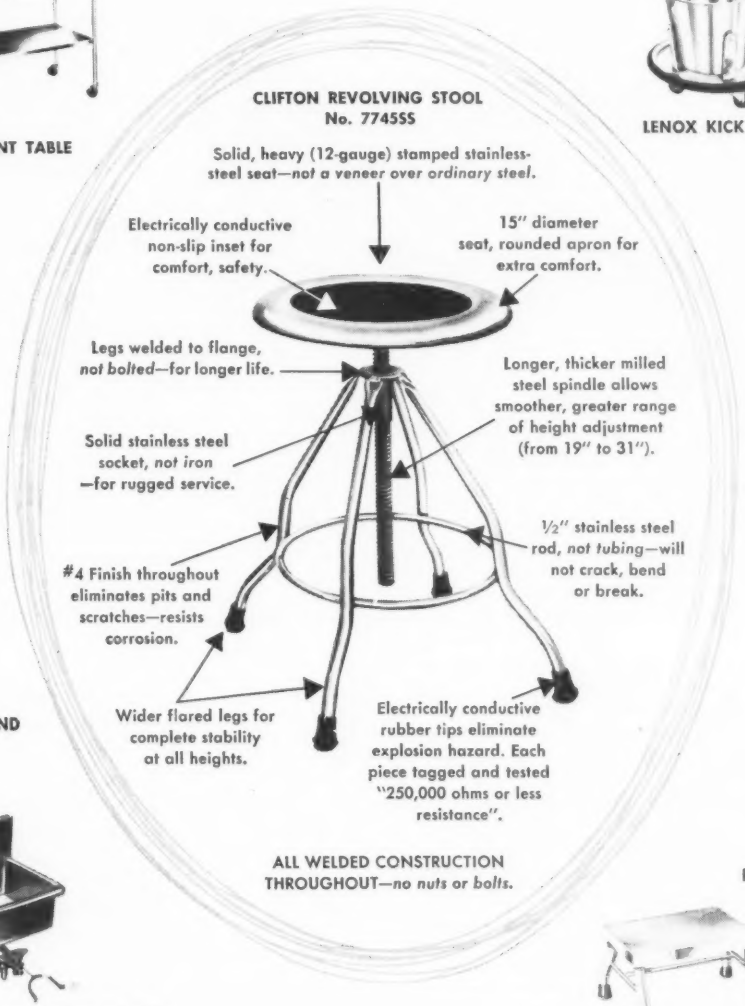


KELLOGG SPONGE RACK

WINFIELD FOOT STOOL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15" diameter seat, rounded apron for extra comfort.
Legs welded to flange, not bolted—for longer life.
Longer, thicker milled steel spindle allows smoother, greater range of height adjustment (from 19" to 31").
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No. 68 All-Electric
Hilow Bed

● This new all-electric bed has only 5 electrical parts—2 condensers, 1 Thermal and 2 switches. Fewer electrical parts mean less maintenance.

Finger tip controls are mounted on both sides of the bed for easy access of patient or nurse. Any height—any spring position—can be quickly activated or de-controlled by the simple touch of a finger.

All mechanical parts are enclosed in a trim center channel. No impediments to easy cleaning. Permanently lubricated with oilite bearings, washers and nuts.

Large 5″ casters (standard equipment) make the bed easy to move, yet in low position the top of the spring is only 17″ from the floor.

All required spring positions can be had on this "fresh, new look" Hill-Rom bed. Illustrated brochure sent on request.

The entire spring and mattress assembly folds into one compact, upright position for quick, easy, more complete cleaning. There are no obstructions such as sharp edges or racks to impede cleaning. All exposed metal parts of foot end and inner legs are covered with stainless steel—no paint to chip off. The edges of all end panels are protected with extruded anodized aluminum trim.

The No. 68 Hill-Rom All-Electric Hilow Bed is listed by Underwriters' Laboratories, Inc., re-examination service, for use with oxygen administering equipment.

HILL-ROM COMPANY, INC. · BATESVILLE, INDIANA

VA Changes Managerial Titles

Top personnel of Veterans Administration medical installations have just acquired new titles.

Managers of the VA hospitals, domiciliaries, centers, and independent outpatient clinics now are directors of these stations. The assistant managers became assistant directors.

Directors of professional services now are chiefs of staff, and assistant directors of professional services for research and education are associate chiefs of staff.

According to the VA Information Service, the redesignations are only to provide more suitable titles. No change in duties, pay, or military status is involved.

New Process Speeds Vaccine Production

The development of a technic that might help speed production of Sabin live-virus poliomyelitis vaccine has been reported by the PHS.

The method, developed by Dr. C. W. Hiatt of the Division of Biologics Standards could have an important application to the manufacture of live attenuated poliomyelitis vaccine. The appearance of naturally present viruses of monkey kidney origin at the various stages in the manufacturing process of the vaccine constitutes a major production problem.

English Fight Nurse Shortage with 5-day Week

A plan to beat the nurse shortage by an "in on Monday, out on Friday" surgical schedule began last month at Leicester Royal Infirmary. If the scheme proves workable, it may be adopted by hospitals throughout Britain.

Leicester officials believe that absence of wekend duty will attract more nurses, part-time trained staff and auxiliaries. Under the plan, 15 patients will be admitted for operations each Monday and discharged on Friday. If complications occur after the patients leave the hospital, they will be readmitted as emergency cases.

Hospital congestion at Leicester grew when a shorter week for nurses was introduced in April. The infirmary had to close 60 of its 500 beds, and the waiting list rose to over 3,000.

 For further information see postcard opposite page 140.

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For further information see postcard opposite page 140

Hospital Topics Book Corner

REPORT OF THE COMMITTEE ON THE CONTROL OF INFECTIOUS DISEASES. ***Evanston, Ill.: American Academy of Pediatrics. 132 pp. $1.00.***

"The Redbook," an authoritative reference work published in 13 editions since 1938, has been completely rewritten for this 1961 book.

Purpose of the manual is to present a concise digest of acceptable measures for prevention, treatment, and control of infectious diseases, oriented towards the practicing pediatrician (although previous editions have found wide acceptance outside the pediatric specialty).

This edition has been expanded to cover more subjects, including drug dosages, serum reactions, newer viral diseases, and the latest thoughts on immunizations. A variety of tables report such subjects as pediatric dosages of antibiotic and chemotherapeutic agents; antibiotic dosages for premature infants; toxic reactions, diseases and other conditions associated with an exanthem.

The book's introduction voices the hope that the present edition will maintain the high standards of accuracy, brevity, and dependability set by its predecessors. It does.

DOCTORS, PATIENTS, & HEALTH INSURANCE. ***By Herman M. Somers and Anne R. Somers. The Brookings Institution, Washington, D. C.: May, 1961. $7.50.***

As pointed out by the authors of this excellent volume, the sheer weight of accumulated data relating to health insurance in the United States is overwhelming. For some time now there has been an urgent need for a work that would present —in relatively compact, organized, and palatable form—the broad outlines of the remarkable developments of the last decade or so, as well as an evaluation of the problems which these developments have brought with them, and an informed projection of what lies ahead in the discernible future. This task has been brilliantly achieved by the authors.

Whether one comes to this book as a bewildered layman or as an only slightly-less confused professional working in any one of the health fields, the authors will be found to provide a clear, consistent guide to the complexities of such concepts as "community rating," "loss ratios," and "service vs. indemnity benefits." The astonishing growth of all the varieties of prepayment plans to be found in the United States today, the many and ingenious ways in which the problems of constantly increasing costs of medical care are being solved, and the difficulties still to be overcome are portrayed with skill, understanding, and a breadth of social outlook that clarify and illuminate the essential issues.

Hospital administrators, particularly, to whom Blue Cross and all the other health insurance mechanisms often come to represent little more than an element that makes life complicated and difficult, will find here information and background that can help them lift their eyes from the trees and begin to appreciate the forest.

Very near the end, the authors permit themselves the luxury of a critical opinion of the attitudes brought to the vital questions with which they have been dealing. They express regret that some doctrinaire advocates of national health insurance attack each advance of private health insurance, like the recent innovation of major medical, as a form of public deceit. And popular journalism has often responded by dealing with governmental participation in health and medical affairs as if the only issue were national health insurance."

Such a course, the authors contend, not only runs counter to experience—the simultaneous growth of private health insurance and public programs—but "seriously interferes with sober consideration and search for viable answers to the problems facing us."

For the student desirous of exploring in greater detail any of the specific issues discussed in this work, the abundant footnote references will constitute a rich and fruitful bibliography. Many tables of statistics and a complete index add to the usefulness of the study.

Doctors, Patients, & Health Insurance is certainly destined to become —and remain for some time—the definitive book on this subject. Even after its specific data have grown obsolete, it is likely to be referred to repeatedly for the unusually lucid and detailed record it has compiled of the structure and scope of the health insurance mechanism at a particular point in American history.—*Gerald Blank.*

HOSPITAL USE AND CHARGES BY DIAGNOSTIC CATEGORY. ***By Monroe Lerner, research associate, Health Information Foundation.***

With the provision of hospital services a major activity in the United States, charges for these services have become a subject of considerable public debate. Yet, as this booklet states, sizeable gaps in our knowledge continue to exist. In an attempt to supply some of the needed information, this report presents some findings of a 1956 study of subscribers to the Blue Cross Hospital Service in Indianapolis, Ind.

Utilizing many easily-readable graphs and tables, this study provides for one sizeable insured population precise statistical data on their use of hospital services and the cost of these services *by detailed medical diagnosis.*

Many more such studies, in different localities and based on different population groups, should be made. Then, hospital spokesmen (and/or critics) would have some *sound* data (now lacking) with which to talk about such problems as "overutilization" or "abuse" of facilities.

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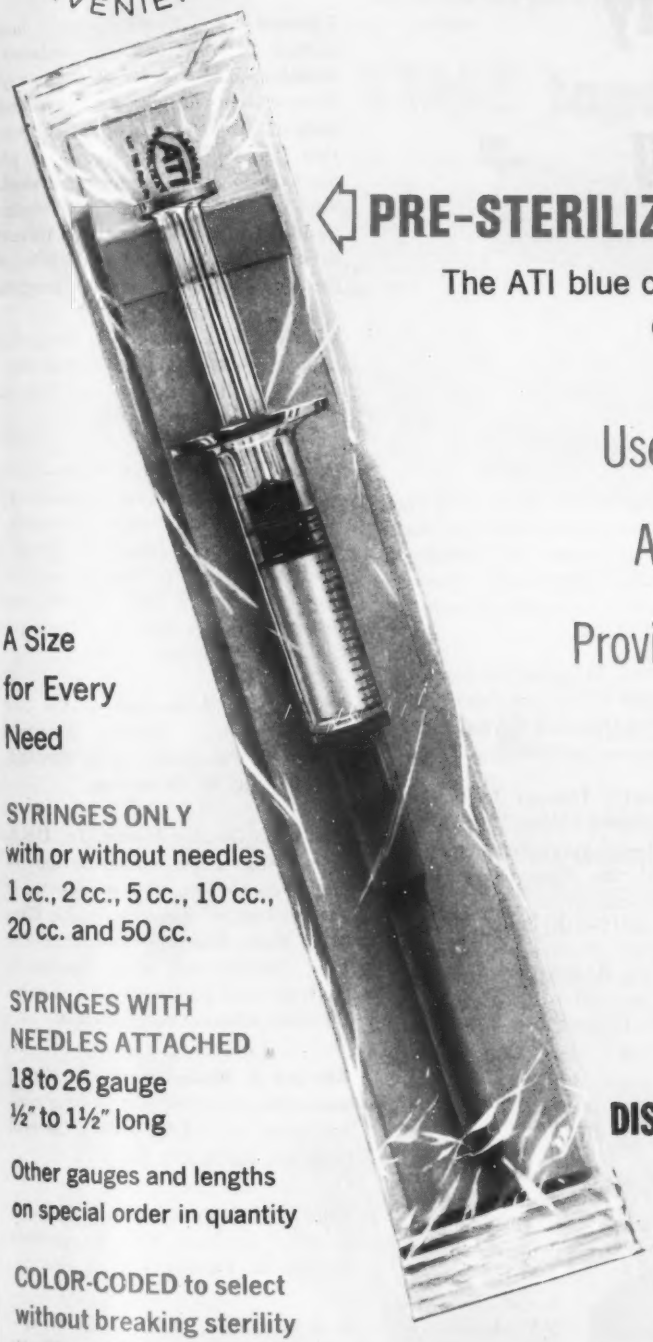

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Personally Speaking

Newman M. Biller—has been appointed executive director of the Jewish Chronic Disease Hospital, Brooklyn.

John C. Booth—has been appointed assistant director, the Hospital Association of Pennsylvania, Harrisburg. He received his M.H.A. from the University of Michigan program in hospital administration.

John N. Bowden, M.D.—has been appointed associate director of the Hospital of the University of Pennsylvania. He succeeds **Harold Dana, M.D.**, who retired.

John A. Bradley, M.D.—has been appointed associate administrator and director of research of the Santa Rosa Medical Center, San Antonio, Texas.

Adrian Brodey, M.D.—has been named director of dermatology at the Peninsula General Hospital, Edgemere, N.Y.

Jeanette H. Fessenden, R.N.—has been named administrator of the House of the Holy Comforter, New York, a hospital for the care of the chronically ill. Miss Fessenden succeeds **Mary Jane Hutchinson**, who has retired after 14 years service as administrator of the hospital.

Arthur W. Fleming, M.D.—has been appointed chairman, executive committee, Department of Pediatrics, Stritch School of Medicine, Chicago. Dr. Fleming is also clinical professor in the department.

J. M. Garrett, M.D.—is the new full-time director of the outpatient clinic, Memorial Hospital, Corpus Christi, Texas.

Major General Thomas J. Hartford, Deputy Surgeon General of the Army—has been appointed executive director of the Executive Council of the Association of Military Surgeons of the United States.

Mrs. Virginia B. Jefferson—has been appointed executive director of the Community Blood Council of Greater New York.

William A. Kelly, M.D.—has become a member of the senior staff of the hospital consulting firm of Anthony J. J. Rourke, New Rochelle, N.Y. He was formerly director, Mount Vernon (N.Y.) Hospital.

John J. Kwasnowski—was recently appointed assistant executive director of the Abington Memorial Hospital, Glenside, Pa.

Robert Lancaster, M.D.—has been appointed chief, Department of Clinical Pathology and director, School of Medical Technology of Mercy Hospital, Baltimore.

Edmond J. Lanigan—has been named assistant to the association's director, and director of the newly-created convention and meetings bureau, American Hospital Association. He will be in charge of administration of all association meetings, including the annual meeting and institutes. **Edward W. Weimer** succeeds Mr. Lanigan as director of the department of central services.

Charles H. Lupton, Jr., M.D.—has been appointed pathologist-in-chief at University Hospital and Hillman Clinics, Birmingham, Ala.

Alexander G. Matoltsy, M.D.— heads a new laboratory for dermatology research in the Boston University-Massachusetts Memorial Hospital Medical Center. Dr. Matoltsy was recently appointed full research professor at the Boston University School of Medicine.

Duncan L. McGoogan—is the new administrator, Moore Memorial Hospital, Pinehurst, N.C., succeeding **Thomas R. Howerton**.

Col. John Gordon Morris, Jr., U.S.A. (Ret.)—has been named to the recently created position of director of administrative services, South Carolina State Hospital, Columbia. The new position has been created to centralize all administrative services for more efficient coordination.

Edward S. Moser—has been named managing director of the new convalescent unit of St. John's General Hospital, Northside, Pa.

John F. Mouton—is director of Watts Hospital, Durham, N.C. He succeeds **Sample B. Forbus**, who is retiring.

S. J. Muirhead, M.D.—has been appointed manager, VA Center, Tem-

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ple, Tex. He was formerly manager, VA hospital, Salisbury, N. C.

Paul E. Nielson, M.D., Ph. D.—has been appointed chairman of the department of psychiatry, Presbyterian-St. Luke's Hospital, Chicago. He is an associate professor of psychiatry, University of Illinois College of Medicine.

Major General Oliver K. Niess—Air Force Surgeon General, recently received the Air Force Association's coveted 1961 Citation of Honor Award. Gen. Niess is one of the world's leading authorities on space medicine and technology.

Julius B. Novak, M.D.—has been awarded a medal for outstanding contribution to tuberculosis control in the Chicago area, by the Tuberculosis Institute of Chicago and Cook County. Dr. Novak is a staff physician at St. Elizabeth Hospital, Chicago, and medical director of the TB institute.

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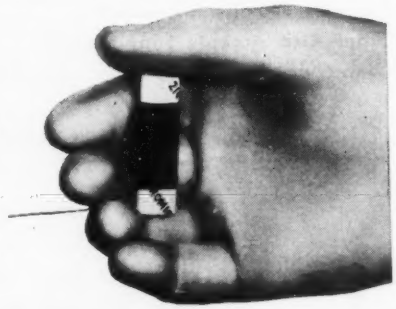

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Jack W. Owen—has been appointed director of the department of administrative services, succeeding **Richard L. Johnson**, who has become director of the department of hospital financing and community planning and secretary of the Council on Blue Cross, Financing, and Prepayment, AHA.

David A. Reed—is new assistant administrator of Warren (Pa.) General Hospital.

Thomas B. Reed—has accepted the position of administrator of the Gadsden County Hospital, Quincy, Fla.

Leo Reich—has accepted a position as administrator, Greene Memorial Hospital, Xenia, Ohio. He formerly held a similar post at Broadlawns Polk County Hospital, Des Moines, Iowa, where **Cyril H. Weagle, Jr.**, has been appointed acting administrator.

Mrs. D. A. Roberts—has announced her retirement as personnel director of St. Francis Memorial Hospital, San Francisco. **Robert L. James**, administrative assistant, will also take over duties as personnel director.

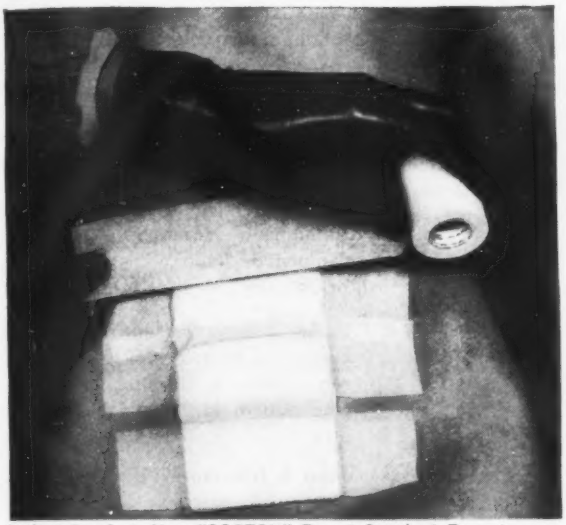
Curtice Rosser, M.D.—has resigned as chief of proctology, Baylor University Medical Center, Dallas, Tex., a position he has held since the section's organization as a separate clinical service. Dr. Rosser has also been chairman of proctology, Baylor University College of Medicine since 1928. Dr. Rosser has been succeeded by **Alvin Baldwin, Jr., M.D.**, a member of the Baylor staff, and associate professor of proctology, Southwestern Medical School.

Harold W. Salmon—has been appointed to represent the Illinois Hospital Association as liaison person with the Illinois Association of Medical Record Librarians. Mr. Salmon is also a member of the I.H.A. council on administrative practice.

Julio Sanguily, M.D.—leading Cuban surgeon who fled his native country, is the new medical director of St. Anthony Hospital, Columbus, Ohio.

Michael Sheff, M.D.—head of the neurology laboratory, and **Sumner I. Zacks, M.D.**, assistant director of

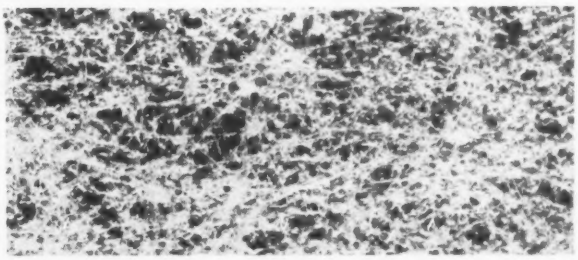
TOTALLY NEW SURGICAL ADHESIVE TAPE ANSWERS TRADITIONAL TAPE PROBLEMS

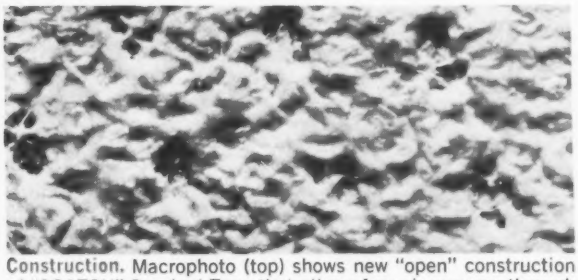


Patient Comfort. New "SCOTCH" Brand Surgical Tape is non-occlusive and physiologically inert. Prevents usual maceration . . . virtually eliminates chemical irritation, even in markedly tape-sensitive patients. It is cool, lightweight.[1]

Removal. Tissue-thin copolymer adhesive layer of "SCOTCH" Surgical Tape clings firmly to skin, yet does not entrap hairs. Tape comes off quickly and easily without depilation. Leaves no dirty residue for time-consuming "clean-up."[1]

Dressing Changes. Sticks fast, even in sitz bath or whirlpool. Fewer changes are required. Yet this tape tears with ease; does not tend to stick to rubber gloves or instruments.[1] There is no shelf deterioration, no "end-of-roll" waste.





Construction. Macrophoto (top) shows new "open" construction of "SCOTCH" Surgical Tape that allows free air passage through **microporous** backing and adhesive. Perforated tape (bottom) is almost totally occluded by thick, potentially irritating mass.[1]

"SCOTCH" Brand Surgical Tape is available through your surgical supply dealer in usual widths. ½ to 3 in., 10-yd. rolls.

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SCOTCH BRAND SURGICAL TAPE MICROPOROUS

No. 530

Application. Unlike conventional adhesive tapes, "SCOTCH" Surgical Tape does not slip or "creep," and ordinarily should be laid on without tension. Where tension is desired or anticipated, shear stress on the skin may be prevented by cross strips of "SCOTCH" Surgical Tape at the ends of primary application.

MINNESOTA MINING AND MANUFACTURING COMPANY
...WHERE RESEARCH IS THE KEY TO TOMORROW

3M

1. Golden, T., A Non-Irritating, Multipurpose Surgical Adhesive Tape, Am. J. Surg. 100: 789,1960.

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laboratories and neuropathologist, Pennsylvania Hospital, Philadelphia, attended the International Congress of Neuropathology, Munich, Germany, and the International Congress of Neurology in Rome. Dr. Zacks will present a paper at the Munich meeting.

Sister Mary Louise—has been appointed administrator of The Seton Psychiatric Institute. **Sister Gertrude** is the assistant administrator, and **Sister Mary Agnes,** director of nursing.

Henry D. Smith, M.D., who headed the PHS hospital in Galveston, Texas has been named medical officer in charge of the Service hospital in Boston, succeeding **Dr. A. A. Doerner,** who has retired. **Milo O. Blade, M.D.,** has been assigned to Galveston, replacing Mr. Smith.

Colonel Larry A. Smith, USAF, MC.—has been promoted to the rank of Brigadier General. He has been director of medical staffing and education, Office of the Surgeon General, and is a senior flight surgeon, specializing in internal and aerospace medicine.

William L. Smith, M.D.—has been named medical director of the Central Alabama Rehabilitation Center and Crippled Children's Clinic now under construction in Montgomery.

Gordon L. Snider, M.D.—has been named chief of the division of thoracic medicine, Mount Sinai Hospital, Chicago. He is also an attending physician at the hospital, and consultant physician and director of the pulmonary functions laboratory, Municipal Tuberculosis Sanitarium of Chicago.

Barry J. Solomon—has been named assistant administrator, James Lawrence Kernan Hospital and Industrial School of Maryland for Crippled Children, Inc., Baltimore.

John A. Stanton—is the new administrative assistant at Cleveland (Ohio) Clinic Hospital. He succeeds **Frank L. Muddle,** who is leaving to become administrator of Roswell Park Memorial Institute, Buffalo, N.Y.

John P. Stevens, M.D.—has been named director of medical education and research at Grant Hospital, Columbus, Ohio.

William A. Stewart—has been appointed assistant administrator of Riverside Hospital, Toledo, Ohio.

Robert Tshetter—is the new administrative resident, Baylor University Medical Center, Dallas. He attended the program in hospital administration, University of Minnesota.

James S. Urda—has been named administrative assistant, Episcopal Hospital, Philadelphia. He received his master's degree in hospital administration from the University of Michigan.

Stuart H. Walker, M.D.—was recently named chief, Department of Pediatrics, Mercy Hospital, Baltimore.

(Continued on page 132)

Actual size picture of Nylon-ductiv webbing. Note imbedded metallic strands.

NEW

NYLON-DUCTIV SAFETY STRETCHER BELTS

This new Safety Stretcher Belt employs Nylon-ductiv webbing—the new heavy, woven nylon with metallic strands imbedded to eliminate all danger of static electricity. Belt can be attached to any stretcher in less than a minute. Has famous quick action, aircraft-type buckle that surpasses all CAA requirements. Ends snapped out of the way when not in use. Attractive green color, 2" wide. Also available in cotton and standard nylon webbing.

Nylon-ductiv 29S-ND $9.50, Nylon 29S-N $8.75, Cotton 29S-C $8.25

Write for New Catalog

Lists the above Belts as well as hundreds of other Humane Restraints for every possible type of application. The most complete line of restraints offered by the oldest manufacturer in this field. It's yours free!

HUMANE RESTRAINT CO. DEPT. A, BOX 16, 824 E. JOHNSON ST. MADISON 1, WISCONSIN

AMSCO "Lectrapoise"

POWERIZED OPERATING TABLE

As the "scrubbed" surgeon enters the operating room, perhaps furthest from his concern is his operating table . . . and justly so. Yet, the knowledge that his patient is supported by an instrument capable of swift, **positively safe performance,** must add confidence when confidence is needed most.

Such a table is the "Lectrapoise". . . newest in a tradition of fine Amsco Operating Tables. From the narrow top to the compact base the "Lectrapoise" *powers* smoothly, quietly through the full posturing range . . . its every modern feature contributing to the patient's comfort and the surgeon's convenience.

Please write for our new 24-page "Operating Tables" brochure — TC-299.

World's largest designer and manufacturer of Operating Tables, Surgical Lights, Sterilizers and related equipment for hospitals

AMERICAN STERILIZER
ERIE · PENNSYLVANIA

Roy J. Weinzettel—has been named administrator, Memorial Hospital of Chatham County, Savannah, Ga. He was formerly administrator, Memorial Hospital, Waycross, Ga.

Frank D. Whalen—is completing an administrative residency at Alexandria (Va.) Hospital while studying for a master's degree at George Washington University. Mr. Whalen is a retired U.S. naval commander, and a graduate of the U.S. Naval Academy.

Kenneth S. Woodward—recently joined the administrative staff of the Methodist Hospital, Philadelphia, as administrative assistant.

Walter Zimmer—has been appointed credit manager, St. James Hospital, Chicago Heights, Ill.

Nursing Appointments

Mildred Ash, R.N., M.E.—has been appointed superintendent of nursing education, Evangelical Hospital school of nursing, Chicago.

Creped, embossed paper for sterilization—in 9" dia. rolls, 12", 24" and 36" wide

STRONG, TOUGH, FLEXIBLE —ALWAYS HANDY

Much more economical. No need to stock many sizes of cut sheets. Pull off any size sheet as needed. Paper cutters also in stock.

OTHER PRO-TEX-MOR DISPOSABLES:—*Sterilizer Bags and Wraps for Syringes, Catheters, Gloves and Bed Pans • Nipple Covers • Examination Table Sheeting • Waste Can Liners • Flushable Bed Pan and Urinal Covers • X-Ray Storage Envelopes • Examination Gowns. Also plastic pillow and mattress covers and aprons.*

Ask your surgical supply dealer for Pro-Tex-Mor Sample Kits.

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MEDICAL DIVISION
CENTRAL STATES PAPER AND BAG CO.
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SOLD EXCLUSIVELY THROUGH MEDICAL AND SURGICAL SUPPLY DEALERS

Mildred C. Metz, R.N.—assistant director of nursing education, Norton Memorial Infirmary, Louisville, Ky., has been appointed to the Kentucky State Board of Nursing Education and Nurse Registration.

Sister St. Joan of Arc—has been appointed director of the school of nursing, St. Bernard's Hospital, Chicago.

Verlie M. Ziegler—has been appointed associate director of nursing service, Presbyterian-St. Luke's Hospital, Chicago. She previously was director of nursing at Oakwood Hospital, Dearborn, Mich.

VA Appointments

J. M. Frankel, M.D.—was recently appointed director of the Veterans Administration West Side hospital and outpatient clinic, Chicago.

William S. Klein, M.D.—has been named director of professional services, Loch Raven Veterans Hospital, Baltimore.

New Officers

Neil McGinniss—director of Oakwood Hospital, Dearborn, Mich., was recently installed as chairman of the Hospital Administrative Section of the Columbia University Alumni. **David L. Everhart,** assistant director of the Henry Ford Hospital, Detroit, was named chairman-elect.

Deaths

Argyl J. Beams, M.D., emeritus clinical professor of medicine at Western Reserve University Medical School, specialist in diseases of the liver.—Sept. 16.

Herman Elwyn, M.D., ophthalmologist and senior assistant surgeon at New York Eye and Ear Infirmary until his retirement. Author of three books in his field.—Sept. 20.

Howard M. Payne, M.D., superintendent of Middlesex County (Mass.) Sanatorium in Waltham. Received a $16,000 grant for study in pulmonary tuberculosis. Published more than 50 medical papers.—Sept. 13.

Joseph J. Ruvane, M.D., director of orthopedic surgery, Jersey City (N.J.) Medical Center. Director of orthopedic surgery department, Seton Hall Medical School.—Sept. 13.

Increase Personal Patient Protection with NEW, IMPROVED

DAVOL 3P* DISPOSABLE CATHETERIZATION SETS

Complete – Sterile – Ready to Use

DISPOSABLE CATHETERIZATION SET with new, exclusive features, contains:

New 15 French all purpose rubber catheter.

- Reinforced heavy gauge multi-cup tray with 700 c.c. fluid capacity.
- Newly designed plastic specimen bag with identification tag.
- Davol Lubraseptic Jelly.
- Specially packaged pre-powdered plastic gloves.
- Fenestrated perineal drape

– Plastic-coated towel – Tray cover and plastic overwrap plus 6 cotton balls.

GREATER SAFETY:

Sterile packed; remains sterile until opened for use. Disposable – eliminates danger of cross-infection.

GREATER CONVENIENCE:

Can be stored nearby for immediate use. Contains all items needed.

GREATER ECONOMY:

Actually costs less than similar materials when individually purchased, assembled, autoclaved and repacked by your staff.

This exclusive Davol 3-P Set is available from your supplier.

For complete information please write, on your professional or Institutional letterhead, to:

DAVOL® RUBBER COMPANY
PROVIDENCE 2, RHODE ISLAND

TRADE TOPICS . .

Francis D. Moore, M. D. (r.), surgeon-in-chief, Peter Bent Brigham Hospital, Boston, and Moseley Professor of Surgery, Harvard Medical School, delivered the annual Baxter Lecture during the recent meeting of the American College of Surgeons in Chicago. Ralph Falk II, chairman of the board of Baxter Laboratories, congratulates Dr. Moore after the lecture. Lectures are devoted to research in the field of liquid solutions of the human body, parenterals and related areas.

News Notes from Baxter

In two appointments at Baxter Laboratories, Inc., Alexander W. Booras has been chosen sales promotion manager for the Baxter/Travenol divisions; and Keica Nishie, M.D., has been appointed senior research pharmacologist by Baxter. Meanwhile, Baxter's president, William B. Graham, has been named a chairman of the drug and chemicals section of the 1961 Crusade of Mercy drive.

Catlin Elected President Of Shampaine Industries

T. B. Catlin, Jr., has been elected president of Shampaine Industries, Inc., it has been announced by H. R. Shampaine, newly-elected chairman of the board of the corporation. Mr. Catlin formerly was administrative vice-president of the Ritter Co. In addition, four new board members have been elected recently: Mr. Catlin; Elliot Stein; R. L. Wolfson; and I. M. Kay.

Three New Veeps At Abbott

Three new vice-presidents have been elected at Abbott Laboratories in a realignment of the company's corporate structure.

Charles S. Brown has been promoted to vice-president, U.S. and Canadian operations; Paul Gerden to vice-president, administration; and Fred J. Kirchmeyer to vice-president, product planning and development.

In addition, Edward G. Beyer, who has been in charge of various control functions for Abbott, has been elected controller by the board of directors.

Stull Named V-P for Aloe

Richard J. Stull, well-known hospital administrator, consultant, and former university vice-president, has been named vice-president of A. S. Aloe Co., division of the Brunswick Corp. He will be in charge of distribution and operations.

Mr. Stull comes to Aloe from Booz-Allen and Hamilton, management consultants, where he was director, health and medical administrative division. Previously he held the post of vice-president, medical and health services, University of California.

In addition, he has served as consultant on many hospital and health projects both in the United States and outside.

Mead Johnson Announces Three Top-level Appointments

Three top-level appointments in Mead Johnson & Co. divisions have been announced. James M. Tuholski, M.D., has been promoted to president, Mead Johnson Laboratories. Dr. Tuholski has been vice-president, product development, Mead Johnson Research Center.

Warren M. Cox, Jr., has been named vice-president, nutritional research, Mead Johnson Research Center. He was formerly director, scientific relations, for the center.

And Howard R. Alexander is the new vice-president, product development, Mead Johnson Research Center. Previously he was director, product planning.

In addition, Reginald B. Collier has been named group director, pediatric diet supplement products, Mead Johnson Laboratories.

News Items

Ellis Smith—is new divisional controller, The Kendall Company, Chicago division. He has been controller

for The Kendall Company, international division.

* * *

H. Richard Wright—has been appointed sales promotion manager; and **Arthur Harelich** has been named marketing manager, Schueler & Co., medical products division.

* * *

William A. Reed, sales representative, Carolina Absorbent Cotton Co.—has been assigned to the New York metropolitan area.

* * *

Sam Mehlinger, former vice-president, Harold Supply Corp. and director of sales, Ipco Hospital Supply Corp.—has resigned this position to enter the hospital supply field. He has recently opened offices in Baldwin, N.Y., for distribution of hospital supplies and equipment to hospitals, institutions, and industrials.

Harold G. Philippi—has been named manager, Minneapolis regional sales and distribution center, hospital supply division, American Hospital Supply Corp. Mr. Philippi formerly was vice-president, hospital supply division, Hoffman-Pinther & Boxworth, S.A., Mexico City, a subsidiary of AHSC.

* * *

Donald Pfarr—has been appointed manager, hospital department, McKesson & Robbins, Inc. He previously was sales manager at the company's Mobile Drug Division.

* * *

Kenneth A. Marden—has been named a product director for the hospital division of Johnson & Johnson. His responsibilities will include a variety of surgical and pharmaceutical products.

* * *

Lewis W. Lehr—has been promoted to manager for medical products by Minnesota Mining & Mfg. Co. He has been with the firm 14 years, starting as a member of the tape division technical service group. He became associated with the medical products program as laboratory manager in 1960.

* * *

Seymour A. Lubman—has been appointed vice president in charge of marketing sales, Purdue Frederick Co. He has been a vice president in charge of sales since 1958, and in his new position will have the additional responsibility of planning and supervising marketing strategy.

* * *

E. Kenneth Marks—has been named director of manufacturing, Executone, Inc. Before joining Executone, he was vice president and general manager of Anton Electronic Laboratories, a Lionel Corp. subsidiary.

(Continued on page 139)

The tape tells you positively...

Before autoclaving, Dennisonwrap Autoclave Tape is pure white. (You can't mistake it for masking tape.) This clean, white look tells you the package or container is ready for the autoclave. It adheres instantly to paper, cloth, glass or metal. It is smudge-resistant . . . pen, pencil or crayon content markings are always legible — even after autoclaving.

IT'S BEEN AUTOCLAVED!

After autoclaving, Dennisonwrap Autoclave Tape shows dark, diagonal lines to indicate that the item has been properly autoclaved. (Only correct levels of heat and moisture bring out the telltale lines.) You'll find it removes cleanly, too . . . without residue. Available in ½", ¾" and 1" widths in 60 yard rolls.

Order from your hospital supply house/or write Dennison Manufacturing Company, Framingham, Mass.

DennisonWrap AUTOCLAVE TAPE

Only last year– the cancer patient in severe pain but strong enough to be ambulatory was often forced to be inactive because of the debilitating side effects of narcotic analgesics.

Winthrop LABORATORIES
New York 18, N.Y.

Today–pain can be relieved by a new potent analgesic that has little or no hypnotic effect–the same patient can stay on her feet and continue her day-to-day activities.

To help the ambulatory patient with cancer remain ambulatory

New Alvodine®

ethanesulfonate **Tablets**

Brand of piminodine ethanesulfonate

potent analgesia and alertness

Clinical results in more than 3000 patients show new Alvodine to be a real advance in the relief of pain – closer to "pure" analgesia than any drug yet developed. And here is a potent analgesic that is fully effective *orally*.

Alvodine tablets give ambulatory patients with cancer relief of pain as great as that obtained from morphine, but free of both the high incidence and severity of side effects associated with morphine.

Most patients with cancer who took Alvodine "...were able to carry on their normal activities such as shopping and house cleaning with marked freedom from their symptoms. Another advantage was the absence of other significant side effects such as constipation commonly encountered with use of other narcotic material, i.e., morphine and codeine."[1]

Because pain is relieved, appetite definitely improves[1] and weight loss is checked.

For the patient with cancer who requires parenteral analgesia, Alvodine can be injected subcutaneously or intramuscularly.

Alvodine tablets, 50 mg., scored. Usual adult dose: ½ or 1 tablet every four to six hours as needed.

Alvodine ampuls of 1 cc. containing 20 mg. per cc. Usual adult dose: from 0.5 cc. to 1 cc. subcutaneously or intramuscularly every four hours as needed. *Narcotic blank required.*

1. Molander, D. W.: Use of a new analgesic in patients with neoplastic disease, *Current Therap. Res.* 2:370, Aug., 1960.

NEW Castle* POWERCLAVE with ELECTRILOCK DOOR

*Trademark Wilmot Castle Company

Open! Just push the button. Door swings out smoothly, silently—*effortlessly.*

Load! New LoadMaster Car and Safe-T-Lock Carriage handle larger loads, more safely.

Lock! Touch the button—door swings shut, locks safely, starts sterile cycle. No handwheel to wrestle with.

SAFER . . . Just a touch of a button closes and locks the door. Steam tight seal is automatic—regardless of the operator's strength. And three separate features make it impossible to open the door under pressure.

EASIER . . . No handwheel to struggle with. It's all automatic. Closing and locking the door, sterilizing, opening the door—it's pushbuttons all the way!

MORE CAPACITY . . . New design of vessel and car increases load capacity. And improved exchange of air and steam reduces cycle time—particularly advantageous with high vacuum techniques.

THAN EVER BEFORE! POWERCLAVE is the first major re-design of hospital sterilizers in forty years. Yet you can fit it right into your present sterilization program—for approximately the cost of a conventional autoclave! Write for POWERCLAVE literature.

Castle

WILMOT CASTLE COMPANY, 1811 E. Henrietta Rd., Rochester 18, N. Y.

Subsidiary of Ritter Company Inc.

(Continued from page 135)

The board of directors of General Foods has elected **E. F. Fitzmaurice,** general manager of the Perkins-S.O.S. division, and **E. W. Kelley,** general manager of the Birds Eye division, as vice presidents of the corporation. Both will continue in their present capacities.

* * *

John Sexton & Co. has appointed two new branch managers. **Frank Sexton, Jr.** has been named general branch manager of the Detroit installation, and **Ted J. Leon** has been named to a similar position in Dallas.

Mr. Sexton

Mr. Leon

Mr. Sexton goes to Detroit from San Francisco, where he managed the buying department. Mr. Leon was formerly manager of the company's Detroit chemical plant, as well as sales and general manager of the branch.

* * *

Stephen T. Donohue—has announced his resignation as director of media relations for the American Medical Association to form The Stephen T. Donohue Co., a public relations counseling organization specializing in the medical and health fields, with offices in New York City.

* * *

Trevor C. Page, controller, Don Baxter Inc.; and **Duane L. Riggs,** controller, The Sisters of The Third Order of St. Francis—have been elected to membership in the Controllers Institute of America.

* * *

Bernard E. Therrien—has been named district manager, Cleveland territory, Precision Scientific Co.

* * *

Medical Investment Corp. (MEDICOR)—has announced the acquisition of Brown & Day, Inc., St. Paul surgical supply house.

Seldon V. Whitaker—has been appointed eastern sales manager, Gaymar Industries, Inc., medical division. He has served as assistant to the president, Rodana Research; and manager of contract sales, surgical products division, American Cyanamid Co.

* * *

Ronald E. Fox, M.D.—has been appointed medical director, Arnar-Stone Laboratories, Inc., a subsidiary of American Hospital Supply Corp.

* * *

Robert E. V. Ramsing—has been elected vice-president, sales, Sierra Electric Corp. He was formerly sales manager for the company.

* * *

G. B. Fox, manager, special engineering division, The Hobart Manufacturing Co.—has been awarded a presidential citation by the National Association of Sanitarians for distinguished service and leadership.

* * *

Shri Krishan—has been appointed staff engineer, Electronic Medical Systems.

* * *

L. L. Green—has been named treasurer, Appleton Electric Co. **R. B. Downey** has been appointed director of industrial engineering for the firm.

* * *

Fred D. Feeley—has been appointed atomic instruments service engineer, Baird-Atomic, Inc.

* * *

Donald F. Moulton—is new technical service representative, Vermont area, Oakite Products, Inc.

* * *

Malcolm M. Morgan—has been appointed regional sales manager, New England territory, for Ultrasonic Industries, Inc.

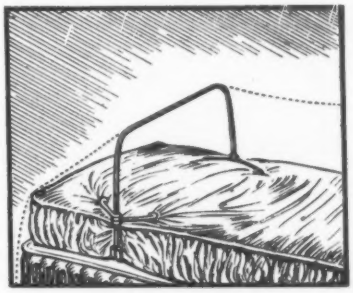
For Patient Protection

POSEY WAIST RESTRAINT

Offers a comfortable and inexpensive means of keeping patient in wheelchair or bed.Two models available—Cotton, Cat. No. CWR-1, $4.50 each; Strong, quick-drying nylon, Cat. No. NWR-1, $5.55 each.

POSEY BED NET

Serves to keep patient in bed without physical attachment to body of patient. May be used on adult bed as well as crib. May be laundered. Adult Bed, Cat. No. An-60A, $13.50; Child Crib, Cat. No. CN-60, $12.75.



LEG CRADLE

Full width of bed with self-locking clamps so Cradle will not tip over. Body Cradle, Cat. No. P-140, $7.50 each, Leg Cradle, Cat. No. P-140A, $7.50 each.

SEND YOUR ORDER TODAY
And Write for Illustrated Literature About Other Posey Hospital Equipment

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2727 E. Foothill Blvd.
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Pasadena, California

For further information see postcard opposite page 140.

Study Spurs New Duty Allocations

Results of a study made in 1956, and followup studies made in 1958, 1959, and 1961, prompted re-allocation of duties performed by various personnel, according to Georgia R. Wilson, assistant administrator and director of nursing service, Jackson-Madison County General Hospital, Jackson, Tenn.

Utilization of study data made it possible for the skilled to spend additional time in nursing care.

In 1956, the head nurse spent her time in seven areas as follows: 60 percent at her own level, 10 percent as staff nurse, two percent as nurses' aide, 15 percent as clerk, three percent as housekeeper, five percent as dietitian, and five percent as messenger. In 1958, the head nurse was spending 86 percent at her own level, seven percent as nurse's aide, and seven percent as clerk.

The percent of time at her own level continued to rise in 1959 with the head nurse spending 95 percent at the head nurse level. In 1961, she is spending 98 percent at her own level and only two percent as clerk.

In 1956, the staff nurse was spending 75 percent of her time at her own level, five percent as head nurse, 10 percent as clerk, five percent as housekeeper, and five percent as messenger. Time spent at her own level has increased so that 1961 figures showed a total of 93 percent.

In 1956, two hours and 24 minutes of care were available per patient per eight hours. Only one hour and 22 minutes were given, leaving one hour and two minutes as non-nursing care time. At the time of the last study, there were two hours and nine minutes of care available per patient per eight hours, and one hour and 40 minutes were spent on nursing care, leaving only 29 minutes as non-nursing care time.

FDA Acts on "Borderline" Drugs

The Food and Drug Administration has begun a drive to curb the widespread sale of "borderline" drugs that can produce a narcotic effect. Criminal cases have been filed in federal courts against illegal drug sellers who market introductory combination packages of pep pills and sedatives called "sets."

The "sets", newest source of thrills for teen-agers, are particularly dangerous when taken with liquor, according to the FDA. Typical sets contain barbiturates and amphetamines which threaten the health of the user and expose him to possible narcotics addiction.

WHO Adopts Budget of 23 Millions for 1962

The World Health Organization has adopted a working budget of $23,607,000 for 1962. The budget includes two million dollars to help finance the organization's world-wide malaria eradication program.

The 1962 budget represents a 19.3 percent increase over the WHO budget for 1961.

CLASSIFIED

OPERATING ROOM NURSES—The City of Chicago has immediate openings for operating room nurses and supervising operating room nurses. Opportunities exist in general or tuberculosis surgery. Salary depends upon qualifications and position desired. Write giving full details of background and interest to Mrs. Esther Liebert, Chicago Civil Service Commission, Room 208, City Hall, Chicago 2, Ill.

"CHAIR-MODE"

A HANDSOME, STURDY BEDSIDE COMMODE VISITOR'S CHAIR THAT INSTANTLY CONVERTS TO A COMMODE

You'd never know that this handsome chair can instantly become a comfortable bedside commode. Its modern, Danish styling completely conceals its real purpose.

"Chair-Mode" lets you economize by eliminating one piece of furniture. It gets rid of the old, unsightly, box-like commode and substitutes in its place a beautiful chair that doesn't even hint that it serves a dual role.

"Chair-Mode" is made to use either a bedpan or conventional pail. Supplied with a flexible plastic bucket with a close fitting cover. Bedpan can be obtained from your local dealer.

You'll want to order several "Chair-Modes" today. They are available in Coral, Saddle Tan or White reinforced, morocco-grain, plastic upholstery — beautiful but durable.

ORDER FROM YOUR DEALER

$49.95

MADE EXCLUSIVELY BY

DUXE PRODUCTS

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USE WITH BEDPAN OR WITH BUCKET

IMPROVE OPERATING ROOM EFFICIENCY

Use Steri-Spools® in a Halliday Wire Cutting Dispenser

Superior Surgical Wire on stainless steel spools. Ready to autoclave.

B&S Gauge 18 to 40.

NO SNARLS — NO KINKS NO WASTE

If your dealer cannot supply, write to the manufacturer —

THOMAS W. HALLIDAY

911 N. WESTMOUNT DRIVE

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TOP CHOICE for Operating and Delivery Room, Lab and Nursery. Choice of colors, fabrics, drawstring or elastic back.

FOR COOL COMFORT and EASY FIT there's nothing like "MARVELLA" NURSE'S SURGERY CAP

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BARD-PARKER STERILE BLADES

NOW you can take your choice between traditional B-P RIB-BACK carbon steel or *new* B-P stainless steel blades. Both are available in a puncture-resistant, *easily* opened package... both assure you of maximum cutting efficiency *every* time.

Whichever you choose

It's Sharp

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10,000,000+

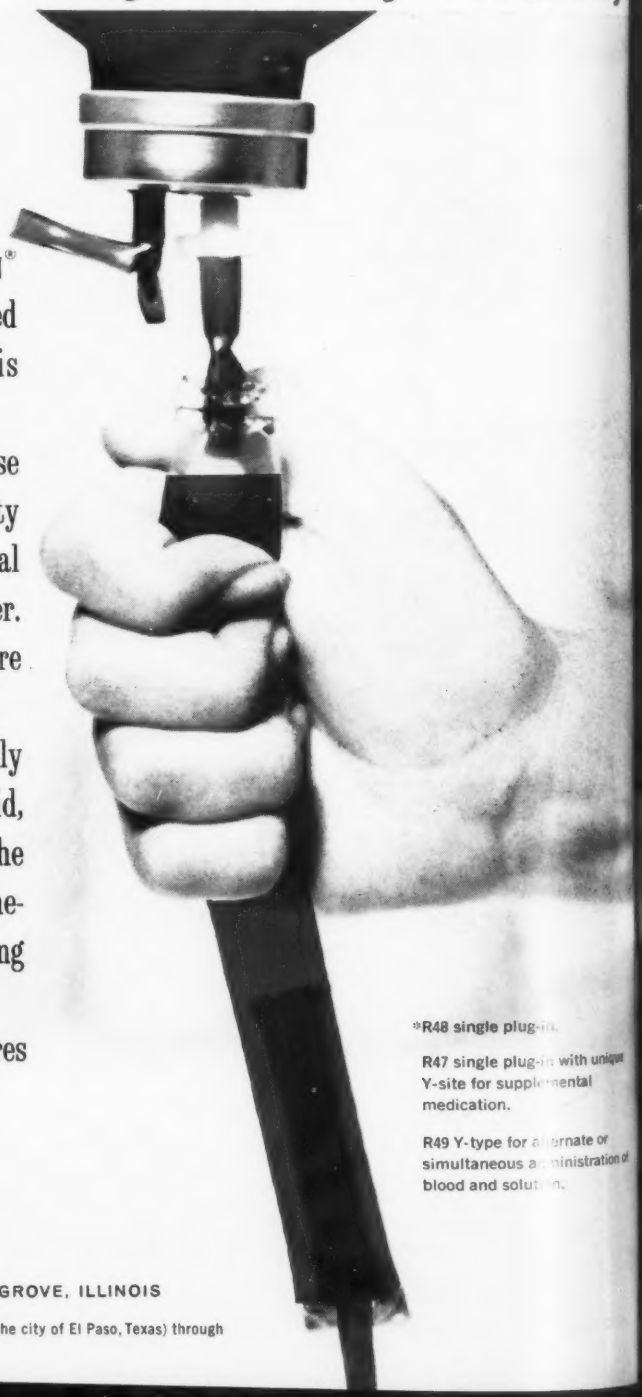
gravity/pressure ADMINISTRATION SETS...
unapproached record of safety • efficiency • reliability

Production of the ten millionth PLEXITRON® pressure-pump set establishes an unmatched measure of professional confidence in this pioneering principle.*

In emergencies the disposable, easy-to-use R48 converts immediately from normal gravity to rapid pressure transfusion by simple manual pumping action on the flexible drip chamber. It returns to gravity flow as soon as pressure is released.

The ball-float pressure valve, operating only when the drip chamber is filled with fluid, makes it impossible to pump air through the set. The exclusive design of the wide-area, fine-mesh filter removes particulate matter during both gravity and pressure flow.

Experience tested 10,000,000 times, assures you of unsurpassed safety and reliability.



*R48 single plug-in.

R47 single plug-in with unique Y-site for supplemental medication.

R49 Y-type for alternate or simultaneous administration of blood and solution.

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